IOWA WILDLIFE ACTION PLAN

APPENDIX 1 - APPENDIX 21

APPENDIX 1. The IWAP - A Plan to Plan

Planning Schedule

The target date for a final review draft of a State Comprehensive Wildlife Plan for lowa is June 1, 2005. Meeting this deadline will allow for adequate review and approval by the Director and the Natural Resource Commission prior to the September 20, 2005 deadline. Developing a more detailed planning schedule will be one of the first tasks of the steering committee in coordination with the plan author.

Plan Contributors

Plan Director - Richard Bishop - Iowa DNR

Responsibilities

- 1) Participate in committee meetings
- 2) Review all drafts of the plan
- 3) Approve all press releases and plan marketing plans
- 4) Review and communicate progress to Division Administrator, Director and NRC commissioners

Plan Coordinator - Terry Little, Iowa DNR

Responsibilities

- 1) Assemble Steering Committee
- 2) Participate in all committees
- 3) Identify and contract with a meeting facilitator
- 4) Identify and contract with plan author
- 5) Coordinate review and editing of all drafts of the plan
- 6) Coordinate all press releases and plan marketing
- 7) Report progress, problems and other developments to DNR administrators

Steering Committee Chair - Doug Harr, Iowa DNR

Responsibilities

- 1) Convene and coordinate all steering committee meetings
- 2) Keep steering members and sub-committees focused, on task and on schedule
- 3) Consult with coordinator and committee members to solve problems
- 4) Plan, schedule and coordinate advisory committee meetings

Steering Committee

Members – Key representatives from Iowa's conservation professionals

- 1) Dale Garner (DNR):
 - a. 2003-04: Coordination with Federal plans (PPJV, etc.)
 - b. 2004-05: plan Director
- 2) Kim Bogenschutz (DNR) Aquatics (fish & invertebrates)

- 3) Dr. Erv Klaas (Iowa State University, retired) Academia, GAP, Terrestrial invertebrates
- 4) Dr. James Dinsmore (Iowa State University retired) Birds
- 5) Daryl Howell (DNR) Threatened & endangered animals and plants, small mammals
- 6) Rick Zarwell (Audubon) Birds, NGOs
- 7) Bruce Ehresman (DNR) Birds, wildlife diversity programs
- 8) Marlene Ehresman (Iowa Natural Heritage Foundation) Habitats and landscapes
- 9) Dave DeGeus (The Nature Conservancy) NGOs, EarthTech, Inc.) Herps
- 10) Angi Hanson (DNR) Wildlife management, private lands programs
- 11) Don Brazelton (Iowa Association of County Conservation Boards) CCB issues, funding, legislative liaison
- 12) Todd Bishop (DNR) Geographic Information Systems support
- 13) Barb Gigar (IDNR) Education, Recreation

Responsibilities

- 1) Develop a "Plan to Plan"
 - a. Finalize a planning schedule
 - b. Identify Advisory Committee members
 - c. Give Advisory Committee direction and guidelines
 - i. Be strategic Begin with the end in mind Be bold, but realistic, 50 year horizon, 10 year focus?
- 2) Develop a meeting format for Advisory Committee meetings
 - a. "Status conference" bring all advisory committee to same level of understanding of resource status
 - b. Professional meeting facilitator someone with wildlife conservation background
 - c. Schedule for meetings Number, timing, topics to cover
- 3) Assign preparatory tasks to committee members
 - a. Identify species and habitat experts to provide information
 - b. Develop teams for specific tasks
 - c. Prepare species and habitat status reports for Advisory Committee
- 4) Develop plan drafts
 - Review Advisory Committee recommendations and develop draft vision, goals, strategic objective statement and priorities
 - b. Work with plan coordinator and author to develop a draft plan outline
 - c. Review all drafts from author before going to wider review
 - d. Present draft plan to advisory committee for review, clarification and improvement

e. Prepare final draft of plan for DNR and NRC review and approval

<u>Advisory Committee</u> – Broad representation from the conservation community Members – representatives from:

- 1) Iowa North American Bird Conservation Initiative (NABCI) committee
- 2) Resource Enhancement and Protection (REAP) coalition
- 3) DNR Wildlife Management
- 4) DNR Wildlife Research
- 5) DNR Forestry
- 6) DNR Fisheries
- 7) DNR Conservation Officers
- 8) Iowa Association of Naturalists (IAN)
- 9) Iowa Conservation Education Council (ICEC)
- 10) Iowa Natural. History Federation
- 11) Natural Resource and Conservation Service (NRCS) Resource Conservation and Development (RC&D), Soil and Water Conservation Districts (SCWD)
- 12) Iowa Farm Bureau Federation
- 13) U.S. Congressional Aides
- 14) Governor's office
- 15) Natural Resource Commission commissioners
- 16) Iowa Herpetological Society
- 17) Iowa Sierra Club
- 18) Iowa Defenders of Wildlife
- 19) Others as identified by steering committee

Responsibilities

- 1) Review all status reports and papers
- 2) Recommend a vision for wildlife in Iowa
- 3) Recommend elements of a strategic vision
- 4) Recommend strategic goals and objectives
- 5) Recommend priorities for species and plant communities for action
- 6) Recommend strategic programs what, where, how much

Plan Author (contractor)

Name: James Zohrer - E Resources Group

Responsibilities

- Consult with the steering committee and IDNR Wildlife Diversity Program personnel to develop and update a working outline for the planning process so that all participants can stay appraised of progress and deadlines.
- 2) Meet with the IDNR's key project personnel, the steering committee or other appropriate staff at regular intervals, to review progress and update planning needs.
- 3) Work with the steering committee to identify work teams and products that will provide the author with information.

- 4) Review existing legislation, IDNR rules and other applicable regulations.
- 5) Working with planning teams, review existing databases and sources of information including, but not limited to, IDNR species management records or plans, Iowa GAP, GIS, heritage records, IDNR and other agencies' wildlife recovery plans, U.S. Fish and Wildlife Service Plans, and information from other state and federal agencies in lowa having an interest in wildlife resource conservation such as DOT, DALS, USACOE, NPS, etc.,
- Review comprehensive plans of other states, agencies or partners for examples of considerations to include.
- Develop a "status document" that summarizes information known 7) on the status of wildlife species and their habitats in lowa.
- Working with the steering committee, identify stakeholders and 8) partners, and arrange for public input meetings at which comments and suggestions are recorded.
- 9) Using the status information and suggestions from the advisory committee, work with the steering committee to identify and priortize species in greatest need of conservation and conservation practices to benefit them.
- Write an initial draft Plan for review and comment by the steering 10) committee, advisory committee, IDNR and the public, and for evaluation for compliance with federal requirements.
- Prepare and submit a final draft of the Plan incorporating comments 11) as recommended by the steering committee to IDNR for final approval by Natural Resource Commission, key partners and the U.S. Fish and Wildlife Service by project completion date of May 31, 2005.

Milestones (Tentative)

October 2003 Finalize steering committee membership.

Develop a planning outline and schedule.

Develop tentative steering committee meeting schedule.

Identify work team leaders and tasks. January 2004

Identify work team members.

March 2004 Review work team final products.

Begin assembling and writing status report.

Identify advisory committee members.

Arrange for advisory committee time and place. Arrange for advisory committee meeting facilitator Develop advisory committee meeting format.

May 2004 Complete draft status report and distribute to steering

committee and DNR for review and comment.

June 2004 Finalize draft status report and distribute to advisory

committee.

July 2004 Advisory committee meeting to develop species and habitat

priorities, a vision statement and major strategic objectives.

November 2004 Review advisory committee meeting products.

Develop draft vision, goals and strategic objective

statements.

DNR review of plan to date.

February 2005 Advisory committee meeting to develop conservation actions

that will implement strategies and determine conservation

priorities.

Steering committee review of conservation actions and

priorities.

Final decision on plan actions and contents.

Begin writing first draft of final plan.

March 2005 First draft of plan to steering committee for review

May 2005 First draft finalized and sent for review and comment to the

advisory committee, the public and U.S. Fish and Wildlife

Service.

June 2005 Comments incorporated and final draft completed.

APPENDIX 2. State Advisory Group Meeting Summary

2-1. Attendees at the IWAP Advisory Group meeting.

Name - Last	Name- First	Affiliation	Title	Address
Anderson-		Natural Resources		
Cruz	Jennifer	Conservation Service	Biologist	Des Moines, IA
			Furbearer Specialist & Wildlife Diversity	
Andrews	Ron	Iowa DNR Wildlife	Program	Clear Lake, IA
Bishop	Richard	Iowa DNR Wildlife	ex-Wildlife Bureau Chief	Des Moines, IA
Bogenschutz	Kim	Iowa DNR Fisheries	Aquatic Nuisance Species Coordinator	Boone, IA
Bonneau	Don	Iowa DNR Fisheries	Fisheries Research Supervisor	Moines, IA
Brandrup	Mike	Iowa DNR Cons & Rec.	Division Administrator	Des Moines, IA
Brown	Larry	Ruffed Grouse Society	Representative	Radcliffe IA
Bruce	Angi	Iowa DNR Wildlife	District Wildlife Supervisor	Lewis, IA
Burk	John	National Wild Turkey Federation	Biologist	Fulton, MO 65251
Cancilla	Jodeane	MacBride Raptor Center		Cedar Rapids, IA
Christiansen	Scott	Prairie Edge Sustainable Forestry Cooperative		Edgewood, IA
Clark	Jane	Sierra Club	Chair	Des Moines, IA
Conover	Marion	Iowa DNR Fisheries	Fisheries Bureau Chief	Des Moines, IA
Deaver	Steve	Linn County Conservation Bd.	Resource Technician	Marion, IA
DeGeus Dinsmore	Dave James	The Nature Conservancy Iowa Audubon	Director of Conservation Programs Des Moines, IA Representative Ames, IA	
Dolan	Robert	Iowa DNR Wildlife	District Wildlife Supervisor	Manchester, IA
Downing	John	Iowa State University	Professor	Ames, IA
Ehresman	Marlene	IA Natural Heritage Foundation	Program Planning Associate	Des Moines, IA
Ehresman	Bruce	Iowa DNR Wildlife	Wildlife Diversity Program Biologist	Boone, IA
Farrar	Eugenia	EEOB lowa State University	Professor	Ames, IA
Flynn	Chris	lowa DNR	Conservation Officer	Birmingham, IA
Ford- Shivvers	Diane	Iowa DNR Cons & Rec.	Asst. Div. Administrator	Des Moines, IA
Francisco	Kim	Natural Resources Commission	Chair	Lucas, IA

Name - Last	Name- First	Affiliation	Title	Address
=	 . .	L DAID MAILUIG	Assistant	D 14
Fritzell	Peter	Iowa DNR Wildlife	Biometrician	Boone, IA
Garner	Dale	Iowa DNR Wildlife	Wildlife Bureau Chief	Des Moines, IA
0 1	_	L DND Et L	District Fisheries	0
Gengerke	Tom	Iowa DNR Fisheries	Supervisor	Spirit Lake, IA
0		US Fish & Wildlife	D	D O
Gilbertson	Nancy	Service	Biologist	Prairie City, IA
0:11:	1-	Iowa Ornithologist's	Conservation	
Gilliam	Jay	Union	Committee Chair	01 '1 14
Gosselink	Todd	Iowa DNR Wildlife	Wild Turkey Biologist	Chariton, IA
0 :"	h 4"	L DAID MAILEY	Mississippi River	D II 14
Griffin	Mike	Iowa DNR Wildlife	Coordinator	Bellevue, IA
0 !!!		American Fisheries		0
Gritters	Scott	Society	President	Guttenberg, IA
l lall	leff.	Representative	Otaff man and an	Dea Malais 14
Hall	Jeff	Boswell's Staff	Staff member	Des Moines, IA
	OL.	Iowa Woodland Owners		Dec Maile 14
Hansen	Steve	Association	AACH BY 51	Des Moines, IA
		L DAID MAILEY	Wildlife Diversity	D 14
Harr	Doug	Iowa DNR Wildlife	Coordinator	Boone, IA
Harson	Greg	Iowa DNR Enforcement	Conservation Officer	Little Rock, IA
			District Wildlife	
Heiser	Neil	Iowa DNR Wildlife	Supervisor	Spirit Lake, IA
Hendricks	Ace	Woodland Growers		Ackworth, IA
Hey	Jane	Morningside College		
		Iowa Trappers		
Hill	Spencer	Association	President	Kanawha, IA
Holland	Steve	Iowa DOT		Ames, IA
			Senior Environmental	
Howell	Daryl	Iowa DNR Parks	Specialist	Des Moines, IA
Hummel	Steve	Ida Co. Cons Bd	Board Member	Lake View, IA
Johnson	Ann	IA Odonata Society	Vice-Chair	Norwalk, IA
Johnson	Chuck	Loess Hills Audubon	Representative	Sioux City, IA
Kane	Kevin	Iowa State University	GIS Facility Director	Ames, IA
		Iowa State University		
Klaas	Erv	(retired)	Professor Emeritus	Ames, IA
	_		Natural Resource	
Kline	Don	Iowa DNR Fisheries	Biologist	Brighton, IA
Koenig	Darwin	Iowa Audubon		Ankeny IA
Koford	Rolf	Iowa Coop Unit	Professor	Ames, IA
		IA Prairie Network, IA		
Lamb	Inger	Native Lands	President	
		Biology Department		
Lampe	Richard	Buena Vista University	Professor	Storm Lake, IA
			District Law	
			Enforcement	
Lancaster	Jennifer	Iowa DNR Enforcement	Supervisor	Manchester, IA
			Natural Resource	
Larson	Chris	Iowa DNR Fisheries	Technician	Lewis, IA
LeClere	Jeff		Consultant	St Paul, MN

Name -	Name-			
Last	First	Affiliation	Title	Address
Luot	1 00	Iowa Environmental	1100	Addices
Leopold	Rich	Council	Chair	Des Moines, IA
			Wildlife Research	
			Supervisor Wildlife	
Little	Terry	Iowa DNR Wildlife	Diversity Supervisor	Des Moines, IA
	•		Wildlife Diversity	
MacInroy	Mark	Iowa DNR Wildlife	Technician	Boone, IA
Major	Annabelle	Iowa State University	Grad Student	Ames, IA
Moritz	Bob	Loess Hills Alliance	Chair	Sioux City, IA
		Iowa Rehabilitator's		
Neumann	Kay	Association	President	Dedham, IA
O'Brien	Jason	Iowa NatureMapping	Prog. Coord.	Ames, IA
Olsen	Frank	Lepidopterist		
		Iowa Cooperative Fish		
Otis	Dave	& Wildlife Research Unit	Professor	Ames, IA
Parmalee	Jeff	Simpson College	Professor	Indianola, IA
		Iowa Department of		
Poole	Kelly	Transportation	Aquatic Ecologist	Ames, IA
Roberts	Steve	Iowa DNR - Wildlife	Biometrician	Boone, IA
		Iowa Farm Bureau	Environmental	,
Robinson	Rick	Federation	Coordinator	West Des Moines, IA
Rovang	Rodney	U.S. Park Service	Resource Manager	Harper's Ferry, IA
Sand	Duane	INHF		Norwalk, IA
			Wildlife Diversity	,
Schlarbaum	Pat	Iowa DNR Wildlife	Program Technician	Boone, IA
Schlict	Dennis		Biology Teacher	Center Point, IA
	1	Iowa Pork Producer's		
Schwager	Marty	Association	Executive Director	Clive, IA
Skibbe	Jessica	Iowa State University	grad student	Ames, IA
Skold	Steve	Safari Club International	Regional Rep.	West Des Moines, IA
			Landowner Incentive	Des Moines, IA
Smith	Kelly	Iowa DNR Wildlife	Program Coordinator	,
Sproul	Tim	Harrison CCB	Director	Woodbine, IA
Steffen	Chuck	The Wildlife Society	President	Ottumwa, IA
Suchy	Willie	Iowa DNR Wildlife	Deer Biologist	Chariton, IA
,		US Fish & Wildlife		,
Sweet	Mike	Service	Biologist	Ft. Snelling MN
		Iowa Trappers		
Sweet	Craig	Association		IA
		Iowa Tree Farm		
Swinton	Rod	Committee		Waterloo, IA
Szcodronski	Kevin	Iowa DNR Parks	Bureau Chief	Des Moines, IA
VanDeWalle	Terry	EarthTech	Biologist	Waterloo, IA
VanWaus	Dave	Pheasants Forever	Regional Director	Colo, IA
Walkowiak	John	Iowa DNR Forestry	Bureau Chief	Des Moines, IA
		Hawkeye Flyfishing		
Weedum	Joe	Association	President	Altoona, IA
		National Wild Turkey		
Whittlesey	Dave	Federation	Supervisor	Woodburn, IA
Wooley	Jim	Pheasants Forever	State Director	Chariton, IA
,			Important Bird Area	, , , , , , , , , , , , , , , , , , ,
Zarwell	Rick	Iowa Audubon	Coordinator	Lansing, IA
	1	.3		,,

Name - Last	Name- First	Affiliation	Title	Address
Zenner	Guy	Iowa DNR - Wildlife	Waterfowl Biologist	Clear Lake, IA
Ziemer	Kathleen	Butterfliz of Iowa		Des Moines, IA
Zohrer	Jim	E Resources, Inc.	Private Consultant	West Des Moines, IA

2-2. Advisory Group Meeting Agenda

SECURING A FUTURE FOR FISH AND WILDLIFE: <u>A Conservation Legacy for Iowans</u>

State Historical Museum Des Moines, IA July 17, 2004

Time	<u>Activity</u>
8:30 – 9:00 a.m.	Registration and Refreshments
9:00 - 9:30 a.m.	Welcome – DNR Director Jeff Vonk
	Introduction to the State Comprehensive Wildlife Conservation Plan (SCWCP) – <i>Terry Little, DNR Wildlife</i> <i>Research Supervisor</i> ,
9:30 – 10:15 a.m.	Status Report on the Condition of Iowa's Wildlife – <i>Jim Zohrer, SCWCP author</i>
10:15 a.m. – Noon	Developing a Vision: Iowa's Fish and Wildlife in 2050 – Facilitated group activity
Noon – 1:00 p.m.	Lunch
1:00 – 1:15 p.m.	Vision Recap and Consensus – Jim Zohrer
1:15 – 3:45 p.m.	Implementing the Vision: Conservation strategies for the next 50 years – Facilitated group activity
3:45 – 4:00 p.m.	Next Steps: Developing and Accepting the Plan – Jim Zohrer

2-3. Status Document Summary

Introduction. The Iowa Department of Natural Resources has the responsibility for preparing a comprehensive wildlife conservation plan by October of 2005. The plan will include eight required "elements". These elements are:

- 1. information on the distribution and abundance of species of wildlife;
- 2. descriptions of locations and conditions of key habitats and community types;
- 3. descriptions of problems which may adversely affect identified species;
- 4. descriptions of conservation actions necessary to conserve identified species;
- 5. plans for monitoring identified species and their habitats;
- 6. plan review procedures;
- 7. efforts for coordinating the plan with other land management agencies;
- 8. description of public participation.

The first step in the preparation of the plan involves the creation of a "Status Document" that includes the first, second and introduction to the third required elements as listed above.

Procedures. A Wildlife Plan Steering Committee was established in late 2003 to assist in the listing of species of conservation concern and to further guide in the writing of the conservation plan. The Steering Committee is made up of 16 individuals plus the Plan author. The members are experts in various wildlife related fields and represent a number of organizations including Iowa County Conservation Boards, Iowa State University, Iowa Department of Natural Resources, The Nature Conservancy, the Iowa Natural Heritage Foundation, the Audubon Society and private individuals. The committee decided that species to be included in the plan should be those for which the Department of Natural Resources has management authority by law (as listed in the Code of Iowa), those included on the state's endangered and Threatened species list, and other groups for which adequate distribution and abundance information is available. The Steering Committee prepared complete lists of all species of each group found in this state, reduced these lists to shorter lists of "species of conservation concern", and helped in the preparation and review of the Status Document.

Results. Iowa is considered by many to be the most altered state in the nation. Prior to European settlement, Iowa was covered by tallgrass prairie, millions of acres of wetlands, wooded river corridors and forested hills in the Northeast part of the state. Today, 90% of the state has been converted for agricultural uses with only 43% of the historic forests, 5% of the wetlands and less than .1% of the original native prairie remaining. Wildlife species responded to the changing landscape, many declined while other flourished in the agricultural setting. Of the 999 species considered in the Plan, 31% are considered as being of the greatest conservation concern as shown in Table 2-1.

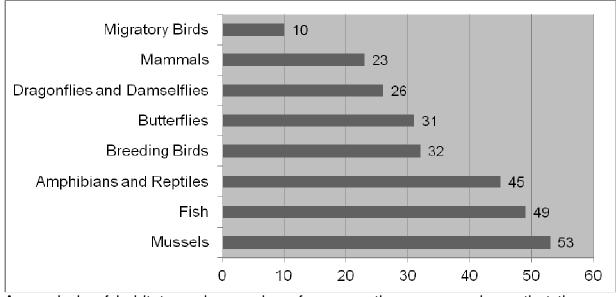
Table 2-1. Percent of Species with the Greatest Conservation Concern

Group	Total Iowa Species Considered	Number with Greatest Need	Percent of Group Total
Fish	153	75	49
Breeding Birds	206	66	32
Butterflies	119	37	31
Mussels	55	29	53
Migratory Birds	199	19	10
Mammals	82	19	23
Land Snails*	8	8	100
Amphibians and			
Reptiles	71	32	45
Dragonflies and			
Damselflies	106	28	26
TOTALS	999	313	31

^{*}Only lowa Endangered, or Threatened species listed.

Of the eight groups of animals considered in the plan (excluding land snails), those showing the highest percentage with species of conservation concern are primarily aquatic groups as shown in the graph below. This may indicate that aquatic habitats and communities may offer the biggest challenges in lowa.

Graph 2-1. Percent of Group of Conservation Concern



An analysis of habitat use by species of conservation concern shows that the most used terrestrial habitats include wetlands and native prairie, while the most used aquatic habitats include rivers and lakes. (Table 2-2)

Table 2-2. Habitat Utilization by Species of Concern

Land Cover Type	Number of Species Utilization
Terrestrial Habitats	
Herbaceous Wetland	62
Native Prairie	57
Forest	47
Agricultural Lands	46
Woodlands	41
Wet-forest/Woodlands	28
Savanna	20
Shrubland	16
Wet Shrubland	7
Aquatic Habitats	
Rivers	74
Lakes	38
Streams	30
Creek	30
Backwater	27
Impoundment	12

Of the terrestrial habitats, it is interesting that the most used habitats (wetlands and native prairie) are also those that have been the most reduced since presettlement times.

Remaining Planning. The status document will now be presented to a State Advisory Group made up of representatives from conservation agencies and organizations, commodity groups and private individuals. The Advisory Group will help develop a vision for the management of lowa's fish and wildlife in the future and will help in identifying strategies for the implementation of species and habitat management practices. The remainder of the plan will focus on answering required elements three through eight as listed above. Additional coordination will be completed with agencies, organizations and individuals and comments on the Plan will be solicited from the public at various meeting throughout the state during the next twelve months. The final Plan will be a historic document that outlines the management of all species of fish and wildlife and their habitats in this state. For the next quarter century it will serve as a quide for fish and wildlife conservation efforts in lowa.

2-4. Vision Statement Elements.

The full advisory group broke into eight working groups to craft elements of a vision statement for lowa wildlife in the year 2030 (a 25-year vision). Individuals were first asked to list their individual ideas on possible elements to be included in the vision statement. Individuals listed 256 possible vision elements. These ideas were shared with their small working group. Similar ideas were then combined and then prioritized into four vision statement elements. The 32 elements submitted by the 8 working groups are listed below in four priority groupings.

Priority One

- 1. Habitat to maintain species throughout the state on public and private land through large habitat corridors.
- 2. Maintain viable populations of wildlife and plant communities in concert with the economic needs of lowa.
- 3. 100% of agricultural land will be managed under approved conservation practices including permanent buffers on all waterways.
- 4. Connecting corridors between multiple representations of major protected ecosystem types.
- 5. Self-sustaining wildlife populations across the state with goal of minimizing the number of Threatened and Endangered species.
- 6. There is stable, permanent funding for lowa's natural resources and environmental education.
- 7. By 2030, reverse watershed and hydrologic alterations to benefit all habitats.
- 8. Accelerated acquisition of critical habitats in the state (up to 10% of the land base).

Priority Two

- The general public understands ecological principles and respects and shares space with wildlife.
- 10. Optimize management for all native species utilizing key ecological management principles on all lands.
- 11. By 2030, all lowa citizens contribute annually to fish and wildlife conservation at a level equal to the national average per capita.
- 12. The Threatened and Endangered Species list is no longer necessary all have recovered.
- 13. Ensure healthy ecosystems that incorporate representative habitats connected through safe habitat corridors.
- 14. There is a 50% increase in participation in outdoor activities associated with fish and wildlife and their habitats with all lowans having opportunities to participate in consumptive uses of natural resources.

- 15. Increase biodiversity and numbers within species of concern, and no loss of present abundant species.
- 16. Dependable and expanded source of conservation funding.

Priority Three

- 17. All lowans (including conservation groups and agencies) are engaged in funding and supporting the fish and wildlife and other natural resources of the state.
- 18. Landowners and conservationists work in harmony.
- 19. Establish a network of diverse habitats such that 10% of the state's land base is in public ownership and less than 10% of species remain on the list of conservation concern species.
- 20. Government conservation spending is dependable, secure and appreciated as a powerful economic investment.
- 21.10% permanently protected, publically accessible land in each of lowa's counties.
- 22. All lowan's understand the state's natural resource issues and how they relate to the economy, quality of life, and quality of habitat.
- 23. Every lowan will have a land and water ethic, and all are advocates for our natural resources.
- 24. Expanded knowledge of existing organisms in Iowa, and effective communication of this data.

Priority Four

- 25. lowans practice environmentally sustainable agriculture.
- 26. Create a comprehensive list and better data on populations and ecological processes of all species in lowa.
- 27. All citizens understand the value of conservation (economics and biology) and have opportunities for both consumptive and non-consumptive use.
- 28. Maintain diverse opportunities for all people to enjoy and benefit from wildlife.
- 29. Mandated environmental education curriculum in K-12 classrooms.
- 30. Wildlife and fisheries management is based on science, not emotions or politics because political leaders are aware of the economic benefits and social values of lowa's natural resources.
- 31. Restoration and protection of diverse and representative natural landscapes, large and small, public and private.
- 32. Increased wetland habitat by 500% over 2000 estimate, including ephemeral ponds and 25% of all potholes.

In general, the 32 suggested vision statement elements fell under *habitat* statements, wildlife statements, education statements, and management statements. All 32-vision statement elements were combined and refined into four top priorities as listed below.

Habitat-related Priority

Adequate, diverse habitat (10% of land base), including habitat corridors, exist to serve the needs of fish and wildlife.

Wildlife-related Priority

Sustainable wildlife populations exist so that the Threatened and Endangered Species List is no longer needed.

Education-related Priority

General public understands ecological principles, respects wildlife, and participates in nature-based activities.

Management-related Priority

Optimize management for wildlife and plan communities using key ecological management principles and techniques on all lands.

A fifth frequently mentioned element related to securing an adequate and dependable source of conservation funding. It was determined that this is actually a conservation strategy and should be included there.

2-5. Conservation strategies to implement vision elements.

The eight working groups reconvened to develop strategies that would implement each vision element.

<u>Habitat related element</u>- Adequate, diverse habitat (10% of land base), including habitat corridors, exist to serve the needs of fish and wildlife.

- 1. Develop partnerships to provide adequate, sustained reliable funding to restore, protect and manage a diverse habitat base, with priority to identified habitats, (i.e. percentage of sales tax dedicated to fish and wildlife).
- 2. Develop tax incentives to encourage good land stewardship.
- 3. Use news media to tell "quality of life" stories of relationship of wildlife to economic vitality.
- 4. Educate lowans on the value of wildlife and associated recreation.
- 5. Legislate meaningful, well-defined laws to protect wetlands, prairies, forests and other significant areas.
- 6. Strategize to get legislators and key decision makers "on our side".
- 7. Put \$20 million a year into land acquisition and long-term private land agreements for habitat establishment.
- 8. Increase research to evaluate the effects of land practices on various species.
- 9. Focus on species of concern.
- 10. Return rural right-of-ways to native species.
- 11. Set and fund annual land protection goals.
- 12. Develop targeted priority conservation areas.
- 13. Restore naturalized stream hydrology.
- 14. Develop statewide comprehensive hydrology model to identify priority conservation areas.
- 15. Identify and permanently protect landscape and biodiversity in regions of ecological importance.
- 16. Restore and protect at least two large tracts in every landform region.
- 17. Permanent protection and enhancement of existing riparian areas.
- 18. Promote federal farm programs that benefit wildlife and eliminate those that result in habitat loss.
- 19. Buffers riparian to all rivers and streams.
- 20. Create and implement watershed conservation plans for comprehensive systems/habitat conservation areas.
- 21. (Secure funding.) Full funding for REAP.
- 22. Identify and expand staff needs.
- 23. Determine costs to implement strategies.
- 24. Identify potential funding sources.
- 25. (Public Ownership) Acquire ownership/easements.
- 26. Identify where current habitat needs are.
- 27. Identify needed corridors among existing habitats.
- 28. Acquire, restore and manage large tracts of natural areas.
- 29. Promote ecotourism.

- 30. Streamline acquisition process.
- 31. Take advantage of key acquisition opportunities.
- 32. Promote greater public/private partnerships.
- 33. Develop/promote volunteer efforts to assist land management.
- 26. (Private Lands) Provide management assistance for private lands.
- 27. Increase/maintain incentives including property tax incentives.
- 28. Promote/expand continuation of long-term federal conservation programs.
- 29. Promote importance of economic benefits of wildlife.
- 30. Increase education for land stewardship.
- 31. (Research/Management) Determine additional habitat needs (greater than 10% of land area).
- 32. Identify needs of wildlife and restore forests, wetlands and prairies to meet those needs.
- 33. Cooperate with adjacent states, Federal and tribal landowners with habitat restoration and management.
- 34. Public ownership through aggressive acquisition program of 5% of land base.
- 35. Set and fund land protection goals to meet habitat base in 10-20 years.
- 36. Remove dams to modify for fish movement.

<u>Wildlife related element</u>- Sustainable wildlife populations exist so that the Threatened and Endangered Species List is no longer needed.

- 37. (Policy) Dollar incentives to reward sound management practices.
- 38. Economic disincentives for bad management practices.
- 39. Institute statewide watershed policies and regulations.
- 40. Coordinate land management policy among all layers of government, expand to engage private sector partnerships.
- 41. Increase and stabilize state and federal funding for Threatened and endangered species focused on habitat.
- 42. Implement statewide land use plan to direct economic development while expanding fish and wildlife habitat.
- 43. Strong coalitions between DNR, federal government, environmental groups and landowner community (especially agricultural).
- 44. Better enforcement of existing regulations.
- 45. Delist species as soon as possible to demonstrate success and solidify landowner and political support.
- 46. Provide State Wildlife Grant funding to all DNR bureaus that manage public lands.
- 47. (Land Management) Conduct research on habitat requirements of Threatened and Endangered species, then restore habitats that meet those requirements.
- 48. Develop ecosystem based management plans that promote biodiversity.
- 49. Acquire, preserve and enlarge habitat tracts on which existing Threatened and Endangered populations occur.
- 50. Maintain predator-prey balance.

- 51. Implement baseline surveys and long-term monitoring of populations.
- 52. Informed reintroduction and relocation of Threatened and Endangered species.
- 53. Adequate control of exotic invasive species.
- 54. (Education) A well-informed and engaged political and administrative leadership.
- 55. Provide educational programs for landowners to understand sound management practices.
- 56. Increase public support for conservation programs through a marketing campaign, education, land stewardship, and citizen data collection.
- 57. Increase database/inventory of fish, wildlife and habitat.
- 58. Secure adequate and permanent funding.
- 59. Create partnerships among all entities.
- 60. Document relationships between water quality and sustainable wildlife.
- 61. Mandate curriculum in Iowa schools.
- 62. Educate all lowans about issues in lowa.
- 63. Prevent spread of invasive species.
- 64. Provide access (walk-in) areas to improve private habitat.
- 70 (Funding) Pursue a sales tax option.
- 65. Educate public elected officials about the need for this type of funding.
- 66. Institute a non-game user fee.
- 67. Institute an excise tax on products (i.e. Teaming With Wildlife).
- 68. Institute an access fee for state-owned public areas including parks.
- 69. Institute a vehicle, boat, ATV, motorcycle, watercraft fee.
- 70. Review other state's funding mechanisms.
- 71. Institute a dove stamp, butterfly stamp, etc..
- 72. Hold a dove season.
- 73. Promote ecotourism such as the monarch migration, Loess hills, pheasant hunting, pelican watches, winter bald eagles and Tundra Swans, dove season.
- 74. Concentrate management of communities and ecosystems instead of single species.
- 75. Create and implement watershed conservation plans for comprehensive systems for habitat conservation areas.

<u>Education related element</u>- General public understands ecological principles, respects wildlife, and participates in nature-based activity.

- 76. Develop and implement a comprehensive environmental education strategy for pre K-adult with a required or reward system for pre K-12 classroom curriculum.
- 77. Expand public relations program to better market lowa's natural resources broad target audience (market research) not just hunters and anglers be pro active buy TV time including improvement of natural resource profession image through better customer relations and respect for the public.
- 78. Work with national agencies and organizations to help model public relations programs and other information.
- 79. Network All conservation groups and agencies work together to collaborate efforts and funding.
- 80. Expand Master Conservationist Program.
- 81. Develop and implement residential programs by District use existing nature areas subsidized for families, adults and teachers.
- 82. Expand outdoor classrooms (staff people to coordinate this).
- 83. Integrate the management process by involving the public through monitoring wildlife and fish (citizen science programs) such as IOWATER and NatureMapping.
- 84. Conduct regional eco-fairs.
- 85. Create a DNR wildlife hotline.
- 86. Create a professional speakers database (including current research).
- 87. Institutionalize an improved fish and wildlife management curriculum specific to lowa in K-12 schools.
- 88. Retrain teachers.
- 89. Get fish and wildlife management questions on standardized tests.
- 90. Engage ICEC, IAN, and AEAs.
- 91. Develop hands-on outdoor activities for schools.
- 92. Encourage physical education teachers to promote outdoor activities (hiking, fishing, hunting, trapping, birding, etc.).
- 93. Develop a sustainable, broad-based funding mechanism to support improved education efforts (such as 0.1 of 1% of sales tax, etc.).
- 94. Develop an Education Bureau within the DNR to: 1. develop a campaign that links quality of life, economics and fish and wildlife activities, 2. contract with a professional agency to develop a media campaign to raise awareness of the importance of fish and wildlife diversity and habitats, 3. coordinate with CCB's, NRCS, FSA, FWS, Extension, and NGO's to deliver a consistent fish and wildlife diversity message, particularly to lowa's private landowners, 4. create urban fish and wildlife specialists to work in metropolitan areas, 5. create a wildlife diversity website, 6. expand hunter education classes in areas of fish and wildlife management and ethical use.

- 95. Provide abundant accessible public lands for a variety of recreational activities (such as hunting, fishing, hiking, birding, trapping, biking, etc.) proximate to populations centers.
- 96. Promote and improve outdoor education fairs, such as the hawk watch, bird festivals, eagle days, etc., with improved and expanded environmental education materials.
- 97. Develop a "Habitat Stewardship Certification".

<u>Management related element</u>- Optimize management for wildlife and plant communities using key ecological management principles and techniques on all lands.

- 98. Encourage, by law, good conservation stewardship and management on a watershed basis in the state through funding incentives, enforcement, and education
- 99. Create management teams for each of the watersheds.
- 100. Conduct biological surveys in each watershed, monitor key groups and determine best management practices for key habitats and species.
- 101. Develop new and more dependable sources of sustainable funding such as a percent of the state sales tax and prioritize existing funding and incentive programs to target critical habitats and species of concern.
- 102. Improve coordination and sharing of information between agencies, NGO's and private sector (such as a web-page for information).
- 103. Develop a statewide invasive species management plan.
- 104. Prevent development of agricultural confinement operations in historic flood plains.
- 105. Construct catch basins or buffer strips for wetlands and other protected ecosystems.
- 106. Work with policy makers on improving wildlife habitat within federal farm policy.
- 107. Utilize performance based land management on public and private land (measure outcomes to optimize management).
- 108. Provide adequate resources to monitor outcome and provide decision support models.
- 109. Institute performance based wildlife management, adequately fund diversity management of state lands so they can be a model of ecosystem management (before and after monitoring and implementation and tracking systems).
- 110. Use USDA and partnership dollars on large targeted landscapes.
- 111. Coordinate land management message to have a consistent voice among land management agencies/organizations.
- 112. Add wildlife biologist positions.
- 113. Utilize existing NRCS CSP and GRP for advancing rotational grazing and diverse crop rotations.
- 114. Start a DNR wetland banking program to restore critical habitat.

- 115. Reform property tax programs to reward protection and management of habitats.
- 116. Seek full mitigation funding from the road system.
- 117. Tie wildlife biologists salaries to wildlife conservation goals met (incentives).
- 118. Invest adequate resources into science and ecological planning to aid in setting focused effective goals (for example- understanding the impact of burns) (how much burning is enough).
- 119. Use Clean Water Act and dollars to address needs of aquatic species.

 There is a lack of political will to use Clean Water Act to protect aquatic species.
- 120. Increase education of private landowners through regional classes to show benefits to wildlife and the public.
- 121. All DNR Divisions work together in effective and efficient resource management. (All divisions and programs should be base funded.)
- 122. Develop a statewide monitoring program for all wildlife species.
- 123. Provide continued or additional technical assistance, cost-share funding etc. to aid landowners with land management.
- 124. Aggressive control of invasive species using early detection and effective strategies.

The Advisory Group decided that there was no need to reconvene for face-to-face meetings - future reviews of the Wildlife Action Plan should be by e-mail or hard copy. The results of this Advisory Group meeting were sent to participants and invitees that did not attend for review and final comment.

Attachment 2-6. Advisory Group Meeting Feedback Form

Feedback Form Iowa Comprehensive Wildlife Conservation Plan Advisory Group Meeting - July 17, 2004

Thank you for your interest in the Iowa Comprehensive Wildlife Conservation Plan that we call "SECURING A FUTURE FOR FISH AND WILDLIFE: A conservation Legacy for Iowans". The Advisory Group met in Des Moines on July 17th for an update on the status of wildlife in Iowa and to provide input for the vision of Iowa wildlife in the year 2030. A copy of the summary of that meeting is attached. Even if you did not attend the meeting, your input on the meeting results and the plan in general are welcomed. If you want to comment please complete this form and return it in the enclosed envelope.

1. AF	NAME: FILIATION:
2.	Did you attend the meeting? yes no
me	Do you want to receive additional information on the plan and on future eetings? yes no If yes, do you want information by mail or eail?
4.	Comments on the Vision Statement Elements:
5.	Comments on Conservation Strategies:
6.	Comments on the Wildlife Conservation Plan in general:
7.	Additional comments:

APPENDIX 3. List of lowa breeding birds considered by the IWAP.

Iowa Abundance: A = abundant, C = common, CL = common locally, U = uncommon, R = rare, XS = extinct, X = extirpated, EX = exotic.

See Appendix 11 definitions of NatureServe Iowa and National Status rankings.

Priority Status: From 2008 Birds of Conservation Concern lists in Bird Conservation Regions 11 (Prairie Pothole), 22 (Eastern Tallgrass Prairie), 23 (Prairie Hardwood Transition), and 3 (FWS Region 3).

Taxonomic order derived from the American Ornithologists' Union Check-List of North American Birds, which can be accessed at: http://www.aou.org/checklist/north/

O No	O de altino Novembro	lowa	lowa	National	Priority
Common Name	Scientific Name	Abundance		Status	Status*
Canada Goose	Branta canadensis			N5B, N5N	
Mute Swan	Cygnus olor	EX/R	SE4	NE	
Trumpeter Swan	Cygnus buccinator	R	S2B	N4B, N4N	
American Wigeon	Anas americana	R		N5B, N5N	
Wood Duck	Aix sponsa	Α		N5B, N5N	
Gadwall	Anas strepera	U	SAB, S4N	N5B, N5N	
American Black Duck	Anas rubripes	R	SAB, SZN	N5B, N5N	
Mallard	Anas platyrhynchos	Α	S5B, S5N	N5B, N5N	
Blue-winged Teal	Anas discors	Α	S4B, S5N	N5B, N5N	
Northern Shoveler	Anas clypeata	U	S2B, S5N	N5B, N5N	
Northern Pintail	Anas acuta	R	S2B, S5N	N5B, N5N	
Green-winged Teal	Anas crecca	R		N5B, N5N	
Canvasback	Aythya valisineria	R		N5B, N5N	
Redhead	Aythya americana	U		N5B, N5N	
Ring-necked Duck	Aythya collaris	R	SAB, S4N	N5B, N5N	
Lesser Scaup	Aythya affinis	R	SAB, S5N	N5B, N5N	
Bufflehead	Bucephala albeola	R	SAB, S3N	N5B, N5N	
Hooded Merganser	Lophodytes cucullatus	U	S2B, S3N	N5B, N5N	
Ruddy Duck	Oxyura jamaicensis	U	S2B, S4N	N5B, N5N	
Northern Bobwhite	Colinus virginianus	CL	S5B	N5	
Gray Partridge	Perdix perdix	EX	SE4	NE	
Ring-necked Pheasant	Phasianus colchicus	EX	SE5	NE5	
Ruffed Grouse	Bonasa umbellus	U	S4B	N5	
	Tympanuchus				
Sharp-tailed Grouse	phasianellus	X	S1B	N4	
Greater Prairie- Chicken	Tympanuchus cupido	R	S1B	N4	
Wild Turkey	Meleagris gallopavo	Α	S5B	N5	

_		lowa	lowa	National	Priority
Common Name	Scientific Name	Abundance	Status	Status	Status*
Common Loon	Gavia immer	X	SXB, S4N	N4B, N5N	
Pied-billed Grebe	Podilymbus podiceps	С	S4B, S4N	N5B, N5N	22,23,3
Red-necked Grebe	Podiceps grisegena	R	SAB, S2N	N5B, N5N	
Eared Grebe	Podiceps nigricollis	R	SAB, S2N	N5B, N5N	
Western Grebe	Aechmophorus occidentalis	R	SAB, S2N	N5B, N5N	
American White Pelican	Pelecanus erythrorhynchos	С	S4N	N3B, N3N	
Double-crested Cormorant	Phalacrocorax auritus	LC.	S3B, S5N	N5B, N5N	
American Bittern	Botaurus lentiginosus	R	S2B	N4B, N4N	11,22,23,3
Least Bittern	Ixobrychus exilis	U	S3B, S2N		11,22,3
Great Blue Heron	Ardea herodias	LC	S3B	N5B, N5N	, ,-
Great Egret	Ardea albus	U	S3B, S4N		
Little Blue Heron	Egretta caerulea	R	SAB, S2N	N5B, N5N	
Cattle Egret	Bubulcus ibis	R	SAB, S4N	N5B, N5N	
Green Heron	Butorides virescens	С	S3B	N5B, N5N	
Black-crowned Night- Heron	Nycticorax nycticorax	R	S3B, S3N		22
Yellow-crowned Night-Heron	Nyctanassa violacea	R	S3B, S3N	N5B, N5N	
White-faced Ibis	Plegadis chihi	R	SAB	N4B, N4N	
Turkey Vulture	Cathartes aura	U	S4B, S5N	N5B, N5N	
Osprey	Pandion haliaetus	R	S1B, S3N	N5B, N4N	
Swallow-tailed Kite	Elanoides forficatus	Х	SXB	N3B	
Mississippi Kite	Ictinia mississippiensis	R	SAB	N5B	
Bald Eagle	Haliaeetus leucocephalus	Sp. Concern R	S3B, S3N	N4B, N4N	11,22,23,3
Northern Harrier	Circus cyaneus	Endangered R	S2B, S4N	N5B, N5N	
Sharp-shinned Hawk	Accipiter striatus	R	SAB, S3N	N5B, N5N	
Cooper's Hawk	Accipiter cooperii	U	S3B	N5B, N5N	
Red-shouldered Hawk	Buteo lineatus	Endangered U		N5B, N5N	
Broad-winged Hawk	Buteo platypterus	R	S3B	N5B	
Swainson's Hawk	Buteo swainsoni	R	S3B, S3N		11,3
Red-tailed Hawk	Buteo jamaicensis	A	S5B, S5N		, -
American Kestrel	Falco sparverius	C	S5B, S5N		
Merlin	Falco columbarius	X	SXB	N4B, N4N	
Peregrine Falcon	Falco peregrinus	Sp. Concern R		N4B, N4N	11,22,23,3

		lowa	Iowa	National	Priority
Common Name	Scientific Name	Abundance		Status	Status*
King Rail	Rallus elegans	Endangered U	SAB, S5N	N4B, N4N	
Virginia Rail	Rallus limicola	U	S3B, S3N	N5B, N5N	
Sora	Porzana carolina	U	S3B, S5N	N5B, N5N	
Common Gallinule	Gallinula galeata	R		N5B, N5N	
(formerly Moorhen)				•	
American Coot	Fulica americana	С	S5B, S5N	N5B, N5N	
Sandhill Crane	Grus canadensis	R	S1B, S1N	N5B, N5N	
Whooping Crane	Grus americana	R	SXB	N1N	
Piping Plover	Charadrius melodus	Endangered	S1B	N3B, N3N	
1201	0, ,,	R	OFD OFN	NED MEN	
Killdeer	Charadrius vociferus	A		N5B, N5N	
Spotted Sandpiper	Actitis macularia	С	S3B, S4N		
Upland Sandpiper	Bartramia longicauda	U	S3B	N5B	11,22,23,3
Long-billed Curlew	Numenius americanus	X	SXB	N5B, N5N	11
Marbled Godwit	Limosa Fedoa	Х	SXB	N5B, N5N	11,22,23,3
Wilson's Snipe	Gallinago delicata	R	S3B	NPB, NAN	
American Woodcock	Scolopax minor	С	S4B, S5N		
Wilson's Phalarope	Phalaropus tricolor	R	S3N	N5B	
Franklin's Gull	Larus pipixcan	R	SAB	N4B	
Ring-billed Gull	Larus delawarensis	R	S5N	N5B, N5N	
Least Tern	Sterna antillarum	Endangered R	S1B, S1N	N?	
Black Tern	Chlidonias niger	Special Concern U	S1B, S4N	N4B	11,22,23,3
Forster's Tern	Sterna forsteri	Special Concern U	S2B, S3N	N5B, N5N	
Rock Pigeon	Columba livia	Α	S5B, S5N	N5B, N5N	
Eurasian Collared-	Streptopelia decaocto	EX	SNA	NNA	
Dove	Zanaida maaratus	^	CED CEN	NE	
Mourning Dove	Zenaida macroura	A	S5B, S5N		
Passenger Pigeon	Ectopistes miratorius	XS XS	SX	NX	
Carolina Parakeet	Conuropsis carolinensis		SX	NX	
Yellow-billed Cuckoo	Coccyzus americanus	C	S3B	N5B	11 00 00 0
Black-billed Cuckoo	Coccyzus erythropthalmus		S3B	N5B	11,22,23,3
Barn Owl	Tyto alba	Endangered R	S1B	N5	
Eastern Screech-Owl	Otus asio	С	S4B	N5	
Great Horned Owl	Bubo virginianus	С	S5B	N5	
Burrowing Owl	Athene cunicularia	R	S1B	N4B, N4N	
Barred Owl	Strix varia	С	S5B	N5	
Long-eared Owl	Asio otus	Threatened U	S2B, S3N	N5B, N5N	
Short-eared Owl	Asio flammeus	Endangered R	S1B, S2N	N5B, N5N	11,22,23,3

Common Name	Scientific Name	lowa Abundance	Iowa Status	National Status	Priority Status*
Common Nighthawk	Chordeiles minor	С	S5B	N5B	
Chuck-will's-widow	Caprimulgus carolinensis	R	S3B	N5B	
Whip-poor-will	Caprimulgus vociferus	CL	S5B	N5B	22,3
Chimney Swift	Chaetura pelagica	С	S5B	N5B	
Ruby-throated	Archilochus colubris	C	S4B, S5N		
Hummingbird					
Belted Kingfisher	Ceryle alcyon	С	S4B	N5B, N5N	
Red-headed	Melanerpes	С	S5B	N5B, N5N	11,22,23,3
Woodpecker	erythrocephalus				
Red-bellied	Melanerpes carolinus	CL	S5B	N5B, N5N	
Woodpecker					
Yellow-bellied	Sphyrapicus varius	R, CL in NE	S1B, S3N	N5B, N5N	
Sapsucker					
Downy Woodpecker	Picoides pubescens	С	S5B	N5	
Hairy Woodpecker	Picoides villosus	С	S5B	N5	
Northern Flicker	Colaptes auratus	С	S5B	N5B, N5N	22
Pileated Woodpecker	Dryocopus pileatus	U, R in W	S3B	N5	
Eastern Wood-	Contopus virens	С	S4B, S4N	N5B	
Pewee	,		,		
Acadian Flycatcher	Empidonax virescens	R	S3B, S3N	N5B	22,3
Willow Flycatcher	Empidonax traillii	С	S4B, S4N		23
Least Flycatcher	Empidonax minimus	R	S1B, S4N		
Eastern Phoebe	Sayornis phoebe	С	S4B, S4N		
Say's Phoebe	Sayornis saya	R	S2B, S3N	N4B, N5N	
Great Crested	Myiarchus crinitus	С	S4B, S4N		
Flycatcher					
Western Kingbird	Tyrannus verticalis	R	S3B, S5N	N5B	
Eastern Kingbird	Tyrannus tyrannus	Α	S5B, S5N	N5B	
Scissor-tailed	Tyrannus forficatus	R	SAB	N5B	
Flycatcher					
Loggerhead Shrike	Lanius ludovicianus	U	S3B, S3N	N4	22,3
White-eyed Vireo	Vireo griseus	R	S2B, S3N	N5B, N5N	
Bell's Vireo	Vireo bellii	U	S3B, S4N	N4B	22,3
Yellow-throated Vireo	Vireo flavifrons	C in E U in W	S4B, S4N	N5B, N4N	
Warbling Vireo	Vireo gilvus	С	S5B, S5N	N5B	
Red-eyed Vireo	Vireo olivaceus	C	S5B, S5N		
Blue Jay	Cyanocitta cristata	C	S5B, S5N		
Black-billed Magpie	Pica pica	R	SAB	N5	
American Crow	Corvus brachyrhynchos	Α	S5B, S5N		
Horned Lark	Eremophila alpestris	C	S5B, S5N		
Purple Martin	Progne subis	C	S5B, S5N		
Tree Swallow	Tachycineta bicolor	Č	S5B, S5N		
N. Rough-winged Swallow	Stelgidopteryx serripennis	C	S5B, S5N		
Bank Swallow	Riparia riparia	С	S5B, S5N	N5B	

Common Name	Scientific Name	lowa Abundance	lowa Status	National Status	Priority Status*
Cliff Swallow	Hirundo pyrrhonota	С	S5B, S5N	N5B	
Barn Swallow	Hirundo rustica	Α	S5B, S5N	N5B	
Black-capped Chickadee	Parus atricapillus	Α	S5B	N5	
Tufted Titmouse	Parus bicolor	CL	S4B	N5	
Red-breasted Nuthatch	Sitta canadensis	R	SAB, S3N	N5	
White-breasted Nuthatch	Sitta carolinensis	С	S5B	N5	
Brown Creeper	Certhia americana	R	S3B	N5	
Rock Wren	Salpinctes obsoletus	R	SA	N5	
Carolina Wren	Thryothorus Iudovicianus	U	S3B, S3N	N5	
Bewick's Wren	Thryomanes bewickii	R	S2B, S2N		22,3
House Wren	Troglodytes aedon	Α	S5B, S5N	N5B	-
Winter Wren	Troglodytes troglodytes	R	SAB	N5	
Sedge Wren	Cistothorus platensis	U	S4B, S4N	N4B, N5N	23
Marsh wren	Cistothorus palustris	CL	S3B	N5B, N5N	23
Blue-gray Gnatcatcher	Polioptila caerulea	C except R in NW	S4B, S4N	N5B, N5N	
Eastern Bluebird	Sialia sialis	С	S4B, S5N	N5B, N5N	
Veery	Catharus fuscescens	R	S2B, S3N	N5B	
Wood Thrush	Hylocichla mustelina	U	S4B, S4N	N5B	22,3
American Robin	Turdus migratorius	Α	S5B, S5N		,
Gray Catbird	Dumetella carolinensis	С	S5B	N5B, N5N	
Northern Mockingbird	Mimus polyglottos	R	S3B	N5	
Brown Thrasher	Toxostoma rufum	Α	S5B, S5N	N5	23
European Starling	Sturnus vulgaris	EX/A	SE5	NE5	
Cedar Waxwing	Bombycilla cedrorum	С	S5B, S5N	N5	
Blue-winged Warbler	Vermivora pinus	U in E R in W	S3B, S4N		22,23,3
Golden-winged Warbler	Vermivora chrysoptera	U	S1B	N4B	23,3
Northern Parula	Parula americana	R	S3B, S3N	N5B	
Yellow Warbler	Dendroica petechia	С	S4B	N5B, N5N	
Chestnut-sided Warbler	Dendroica pensylvanica	R	S3B, S4N	N5B	
Yellow-throated Warbler	Dendroica dominica	R	S3B, S3N	N5B	
Prairie Warbler	Dendroica discolor	R	SAB, S2N	N5B	3
Cerulean Warbler	Setophaga cerulea	R	S2B, S3N	N4B	22,23,3
American Redstart	Setophaga ruticilla	С	S4B, S4N	N5B	·
Black-and-white Warbler	Mniotilta varia	R	S5N	N5B, N4N	
Prothonotary Warbler	Protonotaria citrea	R	S3B, S3N	N5B	22
Worm-eating Warbler	Helmitheros vermivorus	R	S2B, S2N	N5B	3

Common Name	Scientific Name	lowa Abundance	Iowa Status	National Status	Priority Status*
Ovenbird	Seiurus aurocapillus	U	S4B, S4N	N5B	
Louisiana	Seiurus motacilla	R	S3B, S4N	N5B	
Waterthrush					
Kentucky Warbler	Oporornis formosus	R	S1B, S3N	N5B	22,3
Common	Geothlypis trichas	Α	S5B, S5N	N5B	
Yellowthroat					
Hooded Warbler	Wilsonia citrina	R	S1B, S2N	N5B	
Yellow-breasted Chat	Icteria virens	R	S3B, S3N	N5B	
Eastern Towhee	Pipilo erythrophthalmus	CL	S4B, S4N	N5B	
Chipping Sparrow	Spizella passerina	Α	S5B, S5N		
Clay-colored Sparrow	· · · · · · · · · · · · · · · · · · ·	R	S2N	N4B, N4N	
Field Sparrow	Spizella pusilla	С	S5B, S5N		22
Vesper Sparrow	Pooecetes gramineus	С	S4B, S4N		
Lark Sparrow	Chondestes grammacus	CL	S4B	N5B	
Savannah Sparrow	Passerculus		S4B, S5N		
ourumum opumon	sandwichensis		0.2, 00.1		
Grasshopper	Ammodramus	С	S4B, S4N	N5B, N5N	11,22,3
Sparrow	savannarum		_ , _	- , -	, ,-
Henslow's Sparrow	Ammodramus henslowii	Threatened R	S3B, S2N	N3B, N4N	22,23,3
Song Sparrow	Melospiza melodia	С	S5B, S5N	N5B, N5N	
Swamp Sparrow	Melospiza georgiana	U	S3B, S5N		
Summer Tanager	Piranga rubra	R	S3B, S3N		
Scarlet Tanager	Piranga olivacea	U	S4B, S4N		
Northern Cardinal	Cardinalis cardinalis	С	S5B	N5B	
Rose-breasted	Pheucticus Iudovicianus	C	S5B	N5B	
Grosbeak					
Blue Grosbeak	Guiraca caerulea	CL	S3B, S3N	N5B	
Indigo Bunting	Passerina cyanea	Α	S5B, S5N		
Dickcissel	Spiza americana	A	S4B, S4N		11,22,23,3
Bobolink	Dolichonyx oryzivorus	C	S4B	N5B	23,3
Red-winged Blackbird	Agelaius phoeniceus			N5B, N5N	20,0
	Sturnella magna	С	S4B, S4N	N5	
Western Meadowlark		C	S4B, S4N		
Yellow-headed	Xanthocephalus	CL	S3B, S4N		
Blackbird	xanthocephalus		005, 0 111	1100, 11011	
Common Grackle	Quiscalus quiscula	А	S5B, S5N	N5	
Great-tailed Grackle	Quiscalus mexicanus	R	S?	N5	
Brown-headed Cowbird	Molothrus ater		S5B, S5N		
Orchard Oriole	Icterus spurius	CL	S4B, S4N	N5B	
Baltimore Oriole	Icterus galbula	Α	S5B, S5N	N5B	
House Finch	Carpodacus mexicanus	C	SE4	N5	
Red Crossbill	Loxia curvirostra	R	SAB, S2N	N5	

		lowa	lowa	National	Priority
Common Name	Scientific Name	Abundance	Status	Status	Status*
Pine Siskin	Spinus pinus	R	SAB,	N5	
			S5N		
American Goldfinch	Spinus tristis	С	S5B,	N5	
			N5N		
House Sparrow	Passer domesticus	EX	SE5	NE5	
Eurasian Tree	Passer montanus	R	SE	NE	
Sparrow					

APPENDIX 4. List of migratory birds considered by the IWAP.

Iowa Abundance: R = regular, C = casual, A = accidental, X = extirpated.

Priority status: From 2008 Birds of Conservation Concern lists in Bird Conservation Regions 11 (Prairie Pothole), 22 (Eastern Tallgrass Prairie), 23 (Prairie to Hardwood Transition), and 3 (FWS Region 3).

Taxonomic order derived from the American Ornithologists' Union Check-List of North American Birds, which can be accessed at: http://www.aou.org/checklist/north/

Common Name	Scientific Name	Iowa Abundance	Priority Status
Black-bellied Whistling-Duck	Dendrocygna autumnalis	Α	
Taiga Bean-Goose	Anser fabalis	Α	
Greater White-fronted			
Goose	Anser albifrons	R	
Snow Goose	Anser caerulescens	R	
Ross's Goose	Anser rossii	R	
Brant	Branta bernicla	Α	
Tundra Swan	Cygnus columbianus	R	
Eurasian Wigeon	Anas penelope	Α	
Cinnamon Teal	Anas cyanoptera	R	
Garganey	Anas querquedula	Α	
Greater Scaup	Aythya marila	R	
King Eider	Somateria spectabilis	Α	
Common Eider	Somateria mollissima	Α	
Harlequin Duck	Histrionicus histrionicus	Α	
Surf Scoter	Melanitta perspicillata	R	
White-winged Scoter	Melanitta fusca	R	
Black Scoter	Melanitta nigra	R	
Long-tailed Duck	Clangula hyemalis	R	
Common Goldeneye	Bucephala clangula	R	
Barrow's Goldeneye	Bucephala islandica	Α	
Common merganser	Mergus merganser	R	
Red-breasted Merganser	Mergus serrator	R	
Red-throated Loon	Gavia stellata	R	
Pacific Loon	Gavia pacifica	R	
Yellow-billed Loon	Gavia adamsii	Α	
Horned Grebe	Podiceps auritus	R	11,22,23,3
Clark's Grebe	Aechmophorus clarkii	С	
Brown Pelican	Pelecanus occidentalis	Α	
Neotropic Cormorant	Phalacrocorax brasilianus	Α	
Anhinga	Anhinga anhinga	Α	
Magnificent Frigatebird	Fregata magnificens	Α	
Snowy Egret	Egretta thula	R	
Tricolored Heron	Egretta tricolor	A	
Reddish Egret	Egretta rufescens	Α	
White Ibis	Eudocimus albus	Α	
Glossy Ibis	Plegadis falcinellus	Α	

Common Name	Scientific Name	Iowa Abundance	Priority Status
Roseate Spoonbill	Platalea ajaja	Α	
Wood Stork	Mycteria americana	Α	
Black Vulture	Coragyps atratus	Α	
Northern Goshawk	Accipiter gentilis	R	
Ferruginous Hawk	Buteo regalis	Α	
Rough-legged Hawk	Buteo lagopus	R	
Golden Eagle	Aquila chrysaetos	R	
Gyrfalcon	Falco rusticolus	A	
Prairie Falcon	Falco mexicanus	R	
	Coturnicops		
Yellow Rail	noveboracensis	R	11,23,3
Black Rail	Laterallus jamaicensis	A	22,3
Purple Gallinule	Porphyrio martinica	A	
Whooping Crane	Grus americana	A	
Black-bellied Plover	Pluvialis squatarola	R	
American Golden-Plover	Pluvialis dominica	U	
Snowy Plover	Charadrius alexandrinus	A	
Semipalmated Plover	Charadrius semipalmatus	R	
Black-necked Stilt	Himantopus mexicanus	R	
American Avocet	Recurvirostra americana	R	
Solitary Sandpiper	Tringa solitaria	C	11,22,3
Greater Yellowlegs	Tringa melanoleuca	C	11,22,0
Creater renowlegs	Catoptrophorus	<u> </u>	
Willet	semipalmatus	R	
Lesser Yellowlegs	Tringa flavipes	C	
Eskimo Curlew	Numenius borealis	X	
Whimbrel	Numenius phaeopus	C	22,23,3
Hudsonian Godwit	Limosa haemastica	U	11,22,23,3
Ruddy Turnstone	Arenaria interpres	<u></u> R	11,22,20,0
Red Knot	Calidris canutus	C	22,23,3
Sanderling	Calidris alba	 R	22,23,3
<u> </u>	Calidris alba Calidris pusilla	 R	
Semipalmated Sandpiper Western Sandpiper	Calidris pusilia Calidris mauri	 R	
	Calidris minutilla	 R	
Least Sandpiper			
White-rumped Sandpiper	Calidris fuscicollis	R	
Baird's Sandpiper	Calidris bairdii	R	
Pectoral Sandpiper	Calidris melanotos	R	
Sharp-tailed Sandpiper	Calidris acuminata	A	
Dunlin	Calidris alpina	R	
Curlew Sandpiper	Calidris ferruginea	<u> </u>	
Stilt Sandpiper	Caladris himantopus	R	11.00.55
Buff-breasted Sandpiper	Tryngites subruficollis	R	11,22,23,3
Ruff	Philomachus pugnax	Α	
Short-billed Dowitcher	Limnodromus griseus	U	11,22,23,3
	Limnodromus	_	
Long-billed Dowitcher	scolopaceus	R	
Wilson's Snipe	Gallinago delicata	R	

Common Name	Scientific Name	Iowa Abundance	Priority Status
Red-necked Phalarope	Phalaropus lobatus	R	
Red Phalarope	Phalaropus fulicaria	С	
Black-legged Kittiwake	Rissa tridactyla	С	
Ivory Gull	Pagophila eburnea	Α	
Sabine's Gull	Xema sabini	R	
Bonaparte's Gull	Larus philadelphia	R	
Black-headed Gull	Larus ridibundus	С	
Little Gull	Larus minutus	A	
Ross's Gull	Rhodostethia rosea	A	
Laughing Gull	Larus atricilla	C	
Mew Gull	Larus canus	C	
California Gull	Larus californicus	C	
Herring Gull	Larus argentatus	R	
Thayer's Gull	Larus thayeri	R	
Iceland Gull	Larus glaucoides	C	
Lesser Black-backed Gull	Larus fuscus	R	
Slaty-backed Gull	Larus schistisagus	A	
Glaucous Gull	Larus hyperboreus	R	
Great Black-backed Gull	Larus marinus	R	
Caspian Tern	Sterna caspia	R	
Common Tern	Sterna hirundo	R	22,23,3
Arctic Tern	Sterna pardisaea	A	22,20,0
Pomarine Jaeger	Stercorarius pomarinus	A	
Parasitic Jaeger	Stercorarius parasiticus	A	
Long-tailed Jaeger	Stercorarius longicaudus	A	
Thick-billed Murre	Uria lomvia	A	
Long-billed Murrelet	Brachyramphus perdix	A	
Long-billed Murrelet	Synthliboramphus	^	
Ancient Murrelet	antiquus	Α	
White-winged Dove	Zenaida asiatica	A	
Common Ground-Dove	Columbina passerina	A	
Groove-billed Ani		A	
	Crotophaga sulcirostris		
Snowy Owl	Nyctea scandiaca	R	
Northern Hawk Owl	Surnia ulula	Α	
Great Gray Owl	Strix nebulosa	A	
Northern Saw-whet Owl	Aegolius acadicus	R	
Rufous Hummingbird	Selasphorus rufus	C	
Lewis's Woodpecker	Melanerpes lewis	Α	
Black-backed Woodpecker	Picoides arcticus	A	0
Olive-sided Flycatcher	Contopus cooperi	R	3
Western Wood-Pewee	Contopus sordidulus	A	
Yellow-bellied Flycatcher	Empidonax flaviventris	R	
Alder Flycatcher	Empidonax alnorum	R	
Cordilleran Flycatcher	Empidonax occidentalis		
(formerly Western)	(formerly difficilis)	Α	
Vermilion Flycatcher	Pyrocephalus rubinus	A	
Northern Shrike	Lanius excubitor	R	

Common Name	Scientific Name	Iowa Abundance	Priority Status
Blue-headed Vireo	Vireo solitarius	R	
Philadelphia Vireo	Vireo philadelphicus	R	
Gray Jay	Perisoreus canadensis	Α	
	Gymnorhinus		
Pinyon Jay	cyanocephalus	Α	
Clark's Nutcracker	Nucifraga columbiana	Α	
Fish Crow	Corvus ossifragus	Α	
Common Raven	Corvus corax	Α	
Boreal Chickadee	Poecile hudsonica	А	
Pygmy Nuthatch	Sitta pygmaea	А	
Golden-crowned Kinglet	Regulus satrapa	R	
Ruby-crowned Kinglet	Regulus calendula	R	
Mountain Bluebird	Sialia currucoides	С	
Townsend's Solitaire	Myadestes townsendi	С	
Gray-cheeked Thrush	Catharus minimus	R	
Swainson's Thrush	Catharus ustulatus	R	
Hermit Thrush	Catharus guttatus	R	
Varied Thrush	Zoothera naevia	R	
Sage Thrasher	Oreoscoptes montanus	A	
Curve-billed Thrasher	Toxostoma curvirostre	A	
American Pipit	Anthus rubescens	R	
Sprague's Pipit	Anthus spragueii	A	11
Bohemian Waxwing	Bombycilla garrulus	C	
Lapland Longspur	Calcarius Iapponicus	R	
	Calcarius ornatus	A	11,3
Smith's Longspur	Calcarius pictus	R	11,22,3
Snow Bunting	Plectrophenax nivalis	R	11,22,0
Northern Waterthrush	Seiurus noveboracensis	R	
Tennessee Warbler	Vermivora peregrina	R	
Orange-crowned Warbler	Vermivora celata	R	
Nashville Warbler	Vermivora ruficapilla	R	
Connecticut Warbler	Oporornis agilis	R	
MacGillivray's Warbler	Oporornis tolmiei	A	
Mourning Warbler	Oporornis philadelphia	R	
Cape May Warbler	Dendroica tigrina	R	
Magnolia Warbler	Dendroica magnolia	R	
Bay-breasted Warbler	Dendroica castanea	R	
Blackburnian Warbler	Dendroica fusca	R	
Blackpoll Warbler	Dendroica striata	R	
Black-throated Blue Warbler		R	
Palm Warbler	Dendroica caerdiescens Dendroica palmarum	R	
Pine Warbler	Dendroica paimarum Dendroica pinus	R	
	Dendroica pinus Dendroica coronata	R	
Yellow-rumped Warbler	Denuiula Culullala	η η	
Black-throated Gray Warbler	Dondrojos nigroscopo	^	
Townsend's Warbler	Dendroica nigrescens Dendroica townsendi	A A	
	Denuiulua luwiisenai	A	
Black-throated Green	Dondrojos virans	D	
Warbler	Dendroica virens	R	

Common Name	Scientific Name	Iowa Abundance	Priority Status
Canada Warbler	Wilsonia canadensis	U	3
Wilson's Warbler	Wilsonia pusilla	R	
Green-tailed Towhee	Pipilo chlorurus	Α	
Spotted Towhee	Piplio maculatus	R	
American Tree Sparrow	Spizella arborea	R	
Black-throated Sparrow	Amphispiza bilineata	Α	
Lark Bunting	Calamospiza melanocorys	Α	
Le Conte's Sparrow	Ammodramus leconteii	U	
Nelson's Sparrow	Ammodramus nelsoni	R	11,3
Fox Sparrow	Passerella iliaca	R	
Lincoln's Sparrow	Melospiza lincolnii	R	
White-throated Sparrow	Zonotrichia albicollis	R	
Harris's Sparrow	Zonotrichia querula	R	
White-crowned Sparrow	Zonotrichia leucophrys	R	
Golden-crowned Sparrow	Zonotrichia atricapilla	Α	
Dark-eyed Junco	Junco hyemalis	R	
Western Tanager	Piranga ludoviciana	С	
	Pheucticus		
Black-headed Grosbeak	melanocephalus	A	
Lazuli Bunting	Passerina amoena	С	
Painted Bunting	Passerina cirus	Α	
Rusty Blackbird	Euphagus carolinus	U	22,23,3
Brewer's Blackbird	Euphagus cyanocephalus	R	
Bullock's Oriole	Icterus bullockii	Α	
Gray-crowned Rosy-Finch	Leucosticte tephrocotis	Α	
Pine Grosbeak	Pinicola enucleator	С	
Purple Finch	Carpodacus purpureus	R	
White-winged Crossbill	Loxia leucoptera	R	
Common Redpoll	Acanthis flammea	R	
Hoary Redpoll	Acanthis hornemanni	Α	
Lesser Goldfinch	Spinus psaltria	Α	
	Coccothraustes		
Evening Grosbeak	vespertinus	С	

APPENDIX 5. List of Iowa mammals considered by the IWAP.

Iowa Abundance: A = abundant, CL = common locally, U = uncommon, R = rare, V = vagrant,

X = extirpated, RI = re-introduced, I = introduced, D = domestic.

 $\textbf{lowa Trend:} \ K = unknown, \ I = increasing, \ S = stable, \ D = decreasing, \ NA = not \ applicable,$

V = vagrant.

See Appendix 11 for definitions of NatureServe Iowa and National rankings.

The taxonomic order follows that of Mammal Species of the World* used by the Smithsonian

Institution's National Museum of Natural History, which can be accessed at:

http://www.mnh.si.edu/

Common Name	Scientific Name	lowa Abundance	lowa Trend	lowa Rank/ Listing	National Rank
Virginia					
Opossum	Didelphis virginiana	Α	S	S5	N5
Nine-banded	Dasypus				
Armadillo	novemcinctus	R	V	SA	N5
Northern Short-					
tailed Shrew	Blarina brevicauda	Α	S	S5	N5
Elliot's Short-					
tailed Shrew	Blarina hylophaga	CL	K	S4	?
Least Shrew	Cryptotis parva	R	K	S3 Threatened	N5
Pygmy Shrew	Microsorex hoyi	Χ	NA	SU	G5
Masked Shrew	Sorex cinereus	CL	K	S4	N5
Hayden's Shrew	Sorex haydeni	CL	K	S4	N4
Eastern Mole	Scalopus aquaticus	Α	S	S5 S	N5
Big Brown Bat	Eptesicus fuscus	CL	S	S4	N5
Silver-haired	Lasionycteris				
Bat	noctivagans	CL	S	S4	N5
Red Bat	Lasiurus borealis	Α	S	S4	N5
Hoary Bat	Lasiurus cinereus	Α	S	S4	N5
Little Brown Bat	Myotis lucifugus	CL	K	S4	N5
Northern Myotis	Myotis septentrionalis	CL	K	S4	N4
Indiana Bat	Myotis sodalis	R	K	S1 Endangered	N2
Evening Bat	Nycticeius humeralis	CL	K	S3 Threatened	N5
Tri-colored Bat	-				
(Formerly					
Eastern					
Pipistrelle)	Perimyotis subflavus	CL	K	S4	N5
	Nyctinomops				
Big Freetail Bat	macrotis	R	V	SA	N3,N4
Brazilian					
(Mexican)					
Freetailed Bat	Tadarida brasiliensis	R	V	No	N5
Coyote	Canis latrans	Α	S	S5	N5
Gray Wolf	Canis lupus	Χ	V	SX	N4
	Urocyon				
Gray Fox	cinereoargenteus	U	K	S4	N5

Common Name	Scientific Name	Iowa Abundance	lowa Trend	lowa Rank/ Listing	National Rank
Swift Fox	Vulpes velox	X	NA	SX	N3
Red Fox	Vulpes vulpes	Α	S	S4	N5
Feral Dog	Canis familiaris	D	S	SE	NE
Feral Cat	Felis catus	D	S	SE	NE
Moutain Lion	Felis concolor	Χ	V	SX	N5
Canada Lynx	Lynx canadensis	Χ	NA	SX	N5
Bobcat	Lynx rufus	U	1	S3	N5
River Otter	Lutra canadensis	RI	1	S3	N5
Striped Skunk	Mephitis mephitis	Α	S	S5	N5
Spotted Skunk	Spilogale putorius	R	D	S1 Endangered	N5
Wolverine	Gulo gulo	Χ	NA	SX	N4
American	J. 1 9 1				
Marten	Martes americana	X	NA	SX	N5
Fisher	Martes pennanti	Х	NA	SX	N5
Ermine	Mustela erminea	CL	K	S4	N5
Long-tailed			<u> </u>		-
	Mustela frenata	R	K	S4	N5
Least Weasel	Mustela nivalis	R	K	S4	N5
Mink	Mustela vison	A	S	S4	N5
Badger	Taxidea taxus	CL	S	S4	N5
Raccoon	Procyon lotor	A	S	S5	N5
Black Bear	Ursus americanus	X	<u>U</u>	SX	N5
Moose	Alces alces	X	NA	SZ	N5
Mule Deer	Odocoileus hemionus	R	V	SZ	N5
White-tailed	Odocoileus	11	v	02	140
Deer	virginianus	Α	1	S5	N5
Wapiti (Elk)	Cervus canadensis	X	NA	SX	N5
νναριτί (Επ.)	Antilocapra	Λ	INA	UX.	140
Pronghorn	americana	Y	NA	SX	N5
Bison	Bison bison	X	NA	SX SX	N4
Black-tailed	Cynomys	^	INA	3/	1114
Prairie Dog	, ,	I-unsuccessful	NA	SZ	N5
Woodchuck	Marmota monax	A	S	S5	N5
Gray Squirrel	Sciurus carolinenesis	CL	S	S5	N5
Fox Squirrel	Sciurus niger	A	S	S5	N5
Franklin's		A	<u> </u>	33	CNI
	Spermophilus fronklinii	R	D	S3	N5
Ground Squirrel Richardson's		n	U	33	CVI
	Spermophilus	V	K	S2	N5
Ground Squirrel Thirteen-Lined		V	r\	32	СИ
	Spermophilus		C	QE	NE
	tridecemlineatus	Α	S	S5	N5
Eastern	Tomico otrictus	_	C	OF.	NE
Chipmunk	Tamias striatus	Α	S	S5	N5
Dod Coulons!	Tamiasciurus		0		NIT.
Red Squirrel	hudsonicus	CL	S	S3	N5
Southern Flying	Clausamus valara		IZ.		NIE
Squirrel	Glaucomys volans	U	K	S4	N5

Common Name	Scientific Name	lowa Abundance	lowa Trend	Iowa Rank/ Listing	National Rank
Beaver	Caster canadensis	Α	S	S5	N5
Plains Pocket					
Gopher	Geomys bursarius	CL	D	S5	N5
Plains Pocket	Perognathus				
Mouse	flavescens	R	K	S2	N5
Meadow					
	Zapus hudsonius	CL	S	S4	N5
Southern Red-					
backed Vole	Myodes gapperi	R	D	S2	N5
Prairie Vole	Microtus ochrogaster	U	S	S3	N5
	Microtus				
Meadow Vole	pennsylvanicus	Α	S	S5	N5
Woodland Vole	Microtus pinetorum	R	K	S3	N5
Muskrat	Ondatra zibethicus	Α	S	S5	N5
Southern Bog					
Lemming	Synaptomys cooperi	R	D	S3 Threatened	N5
House Mouse	Mus musculus	I	S	SE	NE
Norway Rat	Rattus norvegicus	I	S	SE	NE
Eastern	3				
Woodrat	Neotoma floridana	X	NA	SX	N5
Northern					
Grasshopper	Onychomys				
Mouse	leucogaster	U	K	S3	N5
	Oryzomys palustris	X	NA	No	N5
White-footed	Peromyscus				
Mouse	leucopus	CL	S	S5	N5
	Peromyscus				. 10
Deer Mouse	maniculatus	Α	S	S5	N5
Western	Reithrodontomys				. 10
Harvest Mouse	megalotis	Α	S	S4	N5
Hispid Cotton	megarene	, ,		0.	110
Rat	Sigmodon hispidus	R	V	SU	N5
Porcupine	Erethizon dorsatum	X	NA	SX	N5
Nutria (Coypu)	Myocaster coypus	1	V	SE	NE
White-tailed	ing coasier coypus	1	v	02	11/
Jackrabbit	Lepus townsendii	R	D	S3	N5
Eastern	Lopus townsenun	11	ט	- 55	INU
Cottontail	Sylvilagus floridanus	Α	V	S5	N5

^{*} Wilson, D.E. and D.M. Reeder (editors). 2005. Mammal Species of the World: A Taxonomic and Geographic Reference (3rd Ed.) Johns Hopkins University Press. 2,142 pp.

APPENDIX 6. List of Iowa fish considered by the IWAP.

Iowa Abundance: K = unknown, A = abundant, C = common locally,
U = uncommon, R = rare, X = possibly extirpated.
Iowa trend: K = unknown, I = increasing, S = stable, D = decreasing.
See Appendix 11 for definitions of NatureServe Iowa and National rankings.

Taxonomic order derived from Nelson et al. (2004).*

O - marriero Nama -	O - i Aifi - N	lowa	lowa	Otata Baula	National
Common Name	Scientific Name	Abundance	Trend	State Rank	Rank
Lampreys: Petromyzontidae				00	
				S2	
Chestnut lamprey	Ichthyomyzon castaneus	R	K	Threatened	N4
Northern brook lamprey	Ichthyomyzon fossor	R	K	S?	N4
Silver lamprey	Ichthyomyzon unicuspis	U	K	S3	N5
				S3	
American brook lamprey		С	K	Threatened	N4
Sturgeons: Acipenseri	dae				
Later atomora an	A single graph of the same	Б	17	S1	NIONIA
Lake sturgeon	Acipenser fulvescens	R	K	Endangered	N3N4
Dollid aturna an	Cambirbunabua albua	Ь	D	S1	NI4
Pallid sturgeon	Scaphirhynchus albus	R	D	Endangered	N1
Chavalagae aturgaea	Scaphirhynchus platorynchus	С	S	S4	N4
Shovelnose sturgeon Paddlefishes: Polyodo		U	3	34	114
Paddlefish	Polyodon spathula	С	S	S3	N4
Gars: Lepisosteidae	i diyodon spatnala	U	3	- 55	114
Spotted gar	Lepisosteus oculatus	К	K	S3	N5
Longnose gar	Lepisosteus osseus	C	S	S3	N5
Shortnose gar	Lepisosteus platostomus	A	S	S4	N5
Bowfins: Amiidae	Lopicoticae piatesterriae	,		0.1	140
Bowfin	Amia calva	С	S	S3	N5
Mooneyes: Hiodontida)		
Goldeye	Hiodon alosoides	U	K	S3	N5
Mooneye	Hiodon tergisus	C	S	S4	N5
Freshwater eels: Angu					_
American eel	Anguilla rostrata	R	D	S2	N5
Herrings: Clupeidae					
Alabama shad	Alosa alabamae	Х		SH	N3
Skipjack herring	Alosa chrysochloris	U	K	S3	N5
Gizzard shad	Dorosoma cepedianum	Α	I	S5	N5
Carps and minnows: C	Cyprinidae				
Central stoneroller	Campostoma anomalum	С	S	S5	N5
Largescale stoneroller	Campostoma oligolepis	U	K	S3	N5
Goldfish	Carassius auratus	С	K	SE	NE
Redside dace	Clinostomus elongatus	X		SX	N4
Lake chub	Couesius plumbeus	X		SX	N5

Common Name	Scientific Name	lowa Abundance	Iowa Trend	State Rank	National Rank
Grass Carp	Ctenopharyngodon idella	C	ITEIIG	SE SE	NE
Red shiner	Cyprinella lutrensis	A	S	S5	N5
Spotfin shiner	Cyprinella spiloptera	A	S	S5	N5
Common Carp	Cyprinus carpio	A	S	SE	NE
Gravel chub	Erimystax x-punctatus	Ü	K	S3	N4
Western silvery minnow	Hybognathus argyritis	K	K	S1	N4
Brassy minnow	Hybognathus hankinsoni	C	K	S5	N5
Mississippi silvery	Trybogriatilus Harikilisotti	0	11	- 55	INO
minnow	Hybognathus nuchalis	С	K	S3	N5
Plains minnow	Hybognathus placitus	C	S	S4	N4
Pallid shiner	Hybopsis amnis	R	D	S2	N4
Silver Carp	Hypophthalmichthys molitrix	C	ı	SE	NE
Bighead Carp	Hypophthalmichthys nobilis	C	l I	SE	NE NE
Common shiner	Luxilus cornutus	A	S	S5	N5
Redfin shiner		U	D	S2	N5
	Lythrurus umbratilis	C	S		
Shoal chub	Macrhybopsis hyostomus			S3	N5
Sturgeon chub	Macrhybopsis gelida	R	K	SH	N3
Sicklefin chub	Macrhybopsis meeki	R	K	S1?	N3
Silver chub	Macrhybopsis storeriana	С	S	S5	N5
Decad decad	A 4	V		S1	NIE
Pearl dace	Margariscus margarita	X	14	Endangered	N5
Hornyhead chub	Nocomis biguttatus	U	K	S5	N5
Golden shiner	Notemigonus crysoleucas	С	S	S4	N5
Duanas ahinar	Matronia anaganya	Б	1/	S1	NO
Pugnose shiner	Notropis anogenus	R	K S	Endangered	N3
Emerald shiner	Notropis atherinoides	A		S5	N5
River shiner	Notropis blennius	A	S	S5	N5
Ghost shiner	Notropis buchanani	R	D	S2	N5
Ironcolor shiner	Notropis chalybaeus	X		SX	N4
Bigmouth shiner	Notropis dorsalis	A	S	S5	N5
Blackchin shiner	Notropis heterodon	Х		SX	N5
L		_	1.4	S2	
Blacknose shiner	Notropis heterolepis	R	K	Threatened	N4
Spottail shiner	Notropis hudsonius	С	S	S?	N5
Ozark minnow	Notropis nubilus	U	K	S3	N5
Carmine shiner	Notropis percobromus	С	K	S5	N5
Silverband shiner	Notropis shumardi	Х		SX	N5
Sand shiner	Notropis stramineus	Α	S	S5	S5
				S2	
Weed shiner	Notropis texanus	R	D	Endangered	N5
				S3	
Topeka shiner	Notropis topeka	R	D	Threatened	N3
Mimic shiner	Notropis volucellus	Α	I	S4	N5
Channel shiner	Notropis wickliffi	U	K	S5	N5
Pugnose minnow	Opsopoeodus emiliae	U	K	S3	N5
Suckermouth minnow	Phenacobius mirabilis	U	K	S4	N5
Southern redbelly dace	Phoxinus erythrogaster	С	D	S4	N5

		Iowa	Iowa		National
Common Name	Scientific Name	Abundance	Trend	State Rank	Rank
Bluntnose minnow	Pimephales notatus	Α	S	S5	N5
Fathead minnow	Pimephales promelas	Α	S	S5	N5
Bullhead minnow	Pimephales vigilax	С	K	S4	N5
Flathead chub	Platygobio gracilis	С	D	S3	N5
Western blacknose dace	Rhinichthys obtusus	С	K	S5	N5
Longnose dace	Rhinichthys cataractae	С	K	S3	N5
Creek chub	Semotilus atromaculatus	С	S	S5	N5
Suckers: Catostomida	e				
River carpsucker	Carpiodes carpio	Α	S	S5	N5
Quillback	Carpiodes cyprinus	Α	S	S5	N5
Highfin carpsucker	Carpiodes velifer	С	K	S4	N4N5
White sucker	Catostomus commersonii	Α	S	S5	N5
Blue sucker	Cycleptus elongatus	С	D	S3	N3
Lake chubsucker	Erimyzon sucetta	X		SX	N5
Northern hog sucker	Hypentelium nigricans	Α	S	S4	N5
Smallmouth buffalo	Ictiobus bubalus	Α	S S	S5	N5
Bigmouth buffalo	Ictiobus cyprinellus	Α	S	S5	N5
Black buffalo	Ictiobus niger	U	K	S3	N5
Spotted sucker	Minytrema melanops	С	S	S3	N5
Silver redhorse	Moxostoma anisurum	U	S	S4	N5
River redhorse	Moxostoma carinatum	R	K	S1	N4
				S3	
Black redhorse	Moxostoma duquesnei	U	S	Threatened	N5
Golden redhorse	Moxostoma erythrurum	С	S	S4	N5
Shorthead redhorse	Moxostoma macrolepidotum	Α	S	S5	N5
Greater redhorse	Moxostoma valenciennesi	X	K	SX	N4
North American catfish	es: Ictaluridae				
Black bullhead	Ameiurus melas	Α	S	S5	N5
Yellow bullhead	Ameiurus natalis	O	K	S4	N5
Brown bullhead	Ameiurus nebulosus	R	D	S2	N5
Blue catfish	Ictalurus furcatus	U	K	S3	N5
Channel catfish	Ictalurus punctatus	Α	S	S5	N5
Slender madtom	Noturus exilis	U	S	S3	N5
Stonecat	Noturus flavus	С	S	S5	N5
Tadpole madtom	Noturus gyrinus	U	D	S3	N5
				S2	
Freckled madtom	Noturus nocturnus	R	K	Endangered	N5
Flathead catfish	Pylodictus olivaris	С	D	S4	N5
Pikes: Esocidae					
				S3	
Redfin (grass) pickerel	Esox americanus	U	S	Threatened	N5
Northern pike	Esox lucius	Α	S	S5	N5
Muskellunge	Esox masquinongy	С	S	S5	N5
Mudminnows: Umbrid	ae				
Central mudminnow	Umbra limi	U	S	S3	N5
Trouts and salmons: 5	Salmonidae				
Rainbow trout	Oncorhynchus mykiss	С	S	SE	N5

Common Name	Scientific Name	lowa Abundance	Iowa Trend	State Rank	National Rank
Brown trout	Salmo trutta	С	S	SE	NE
Brook trout	Salvelinus fontinalis	U	S	S3	N5
Trout-perches: Percog	osidae				
Trout-perch	Percopsis omiscomaycus	U	D	S3	N5
Pirate perches: Aphre					
Pirate perch	Aphredoderus sayanus	R	D	S2	N5
Cods: Gadidae					
				S3	
Burbot	Lota lota	U	D	Threatened	N5
New World silversides	: Atherinopsidae				
Brook silverside	Labidesthes sicculus	С	K	S4	N5
Topminnows: Funduli	dae				
Banded killifish	Fundulus diaphanus	U	D	S2	N5
Starhead topminnow	Fundulus dispar	X		SX	N4
Blackstripe topminnow	Fundulus notatus	U	D	S3	N5
Plains topminnow	Fundulus sciadicus	R	K	SH	N4
Livebearers: Poeciliid					
Western mosquitofish	Gambusia affinis	С	K	SE	N5
Sticklebacks: Gastero	steidae				
Brook stickleback	Culaea inconstans	С	K	S4	N5
Sculpins: Cottidae					
Mottled sculpin	Cottus bairdii	R	K	S2	N5
Slimy sculpin	Cottus cognatus	U	K	S3	N5
Temperate basses: Mo					_
White bass	Morone chysops	Α	S	S4	N5
Yellow bass	Morone mississippiensis	Α	Ī	S4	N5
Striped bass	Morone saxatilis	K	K	SE	N5
Sunfishes: Centrarchi					_
Rock Bass	Ambloplites rupestris	С	K	S4	N5
Green sunfish	Lepomis cyanellus	С	S	S5	N5
Pumpkinseed	Lepomis gibbosus	C	K	S4	N5
Warmouth	Lepomis gulosus	C	K	S4	N5
Orangespotted sunfish	Lepomis humilis	C	K	S5	N5
Bluegill	Lepomis macrochirus	A	S	S5	N5
Longear sunfish	Lepomis megalotis	X		SX	N5
Redear sunfish	Lepomis microlophus	C	S	SE	N5
Smallmouth bass	Micropterus dolomieu	C	S	S5	N5
Spotted bass	Micropterus punctulatus	C	K	SE	N5
Largemouth bass	Micropterus salmoides	A	S	S5	N5
White crappie	Pomoxis annularis	A	S	S5	N5
Black crappie	Pomoxis nigromaculatus	A	S	S5	N5
Perches: Percidae					
				S2	
Western sand darter	Ammocrypta clara	U	S	Threatened	N3
Crystal darter	Crystallaria asprella	R	K	S1	N3
Mud darter	Etheostoma asprigene	U	S	S3	N4N5
Rainbow darter	Etheostoma caeruleum	C	K	S4	N5

	lowa lowa				National
Common Name	Scientific Name	Abundance	Trend	State Rank	Rank
				S1	
Bluntnose darter	Etheostoma chlorosoma	R	K	Endangered	N5
lowa darter	Etheostoma exile	С	K	S4	N5
Fantail darter	Etheostoma flabellare	С	K	S4	N5
				S1	
Least darter	Etheostoma microperca	R	K	Endangered	N5
Johnny darter	Etheostoma nigrum	С	S	S5	N5
				S2	
Orangethroat darter	Etheostoma spectabile	U	K	Threatened	N5
Banded darter	Etheostoma zonale	U	K	S3	N5
Yellow perch	Perca flavescens	С	K	S5	N5
Logperch	Percina caprodes	С	S	S3	N5
Gilt darter	Percina evides	Х		SX	N4
Blackside darter	Percina maculata	С	D	S3	N5
Slenderhead darter	Percina phoxocephala	U	K	S3	N5
River darter	Percina shumardi	С	S	S3	N5
Sauger	Sander canadensis	С	K	S4	N5
Walleye	Sander vitreus	Α	S	S5	N5
Drums and croakers: \$	Sciaenidae				
Freshwater drum	Aplodinotus grunniens	С	S	S5	N5

*Nelson, J.S., E.J. Crossman, H. Espinosa-Perez, L.T. Finley, C.R. Gilbert, R.N. Lea, and J.D. Williams. 2004. Common and scientific names of fishes from the United States, Canada, and Mexico. American Fisheries Society, Special Publication 29, Bethesda, MD.

APPENDIX 7. List of Iowa amphibians and reptiles considered by the IWAP.

Iowa Trend: K = unknown, I = increasing, S = stable, D = decreasing
See Appendix 11 definitions of NatureServe Iowa and National Status rankings.
Taxonomic order derived from the Society for the Study of Amphibians and Reptiles
Standard English and Scientific Names Committee, which can be accessed at:
http://www.ssarherps.org/pages/comm_names/Index.php

Common Nome	Scientific Name	Jawa Status	lowa	State Rank	National Rank
Common Name	Necturus maculosus	Iowa Status Threatened	Trend D	S2	N5
Mudpuppy	Notophthalmus	Tilleaterieu	ט	32	CVI
	viridescens v.				
Central Newt	louisianensis	Threatened	S	S2	N5
Tiger Salamander	Ambystoma tigrinum	Tilleateried	<u>D</u>	S4	N5
Smallmouth Salamander			S	S3	N5
Blue-spotted	Ambystoma texanum			- 00	145
Salamander	Ambystoma laterale	Endangered	S	S1	N5
Northern Leopard Frog	Lithobates pipiens	Endangered	S	S5	N5
Plains Leopard Frog	Lithobates blairi		S	S5	N5
i iamo zoopara i rog	Lithobates			- 00	110
Southern Leopard Frog	sphenocephalus		S	S4	N5
Pickerel Frog	Lithobates palustris		S	S5	N5
Crawfish Frog	Lithobates areolata	Endangered	D	S1	N4
Green Frog	Lithobates clamitans	g	S	S5	N5
American Bullfrog	Lithobates catesbeianus		I	S5	N5
Gray Treefrog	Hyla versicolor		S	S5	N5
Cope's Gray Treefrog	Hyla chrysoscelis		S	S5	N5
Spring Peeper	Pseudacris crucifer		S	S5	N5
Western Chorus Frog	Pseudacris triseriata		S	S5	N5
Cricket Frog	Acris crepitans		D	S3	N5
American Toad	Anaxyrus americanus		I	S5	N5
	Anaxyrus woodhousii				
Woodhouse's Toad	woodhousii		S	S4	N5
Fowler's Toad	Anaxyrus fowleri		S	S4	N5
Great Plains Toad	Anaxyrus cognatus		D	S3	N5
Plains Spadefoot	Spea bombifrons		S	S4	N5
Ornate Box Turtle	Terrapene ornata	Threatened	S	S2	N5
Western Painted Turtle	Chrysemys picta belli		I	S5	N5
	Trachemys scripta				
Red-eared Slider	elegans		S	S4	N5
Map Turtle	Graptemys geographica		S	S4	N5
	Graptemys		_	_	
False Map Turtle	pseudogeographica		<u> </u>	S4	N5
Blanding's Turtle	Emydoidea blandingii	Threatened	D	S2	N4
Wood Turtle	Glyptemys insculpta	Endangered	K	S1	N4
Snapping Turtle	Chelydra serpentina		S	S5	N5

Common Name	Scientific Name	Iowa Status	lowa Trend	State Rank	National Rank
Alligator Snapping Turtle	Macrochelys temminckii		K	SU	N3, N4
Yellow Mud Turtle	Kinosternon flavescens	Endangered	D	S1	N5
Common Musk Turtle	Sternotherus odoratus	Threatened	D	S2	N5
Spiny Softshell Turtle	Apalone spinifera		D	S4	N5
Smooth Softshell Turtle	Apalone mutica		D	S4	N5
Slender Glass Lizard	Öphisaurus attenuatus	Threatened	D	S2	N5
Six-Lined Racerunner	Aspidoscelis sexlineata		D	S3	N5
Northern Prairie Skink	Plestiodon septentrionalis		D	S3	N5
Five-Lined Skink	Plestiodon faciatus		S	S4	N5
Great Plains Skink	Plestiodon obsoletus	Endangered	D	S1	N5
Northern Watersnake	Nerodia sipedon	9	D	S5	N5
Diamond-backed	,				
Watersnake	Nerodia rhombifer	Threatened	D	S2	N5
	Nerodia erythrogaster				
Yellowbelly Watersnake			D	S1	N5
	Nerodia erythrogaster				
Copperbelly Watersnake		Endangered	D	S1	N5
Graham's Crayfish		J			
Snake	Regina grahamii		D	S4	N5
Dekay's Brownsnake	Storeria dekayi		S	S5	N5
Northern Red-bellied					_
Snake	Storeria occipitomaculata		S	S4	N5
Smooth Earthsnake	Virginia valeriae		S	S3	N5
Lined Snake	Tropidoclonion lineatum		S	S4	N5
Eastern Gartersnake	Thamnophis sirtalis sirtalis		S	S5	N5
	Thamnophis sirtalis				
Red-sided Gartersnake	parietalis		S	S5	N5
Plains Gartersnake	Thamnophis radix		S	S5	N5
Western Ribbonsnake	Thamnophis proximus		S	S5	N5
Western Wormsnake	Carphophis vermis	Threatened	D	S2	N5
		Special			
Smooth Greensnake	Opheodrys vernalis	Concern	S	S3	N5
Rough Greensnake	Opheodrys aestivus	331133111	K	SR	N5
Prairie Ring-necked				0.1	
Snake	Diadophis punctatus arnyi		D	S4	N5
Blue Racer	Coluber constrictor foxii		D	S4	N5
Eastern Yellow-bellied	Coluber constrictor			<u> </u>	140
Racer	flaviventris		D	S4	N5
Milksnake	Lampropeltis triangulum		D	S4	N5
Ministrance	Lampropeltis calligaster			0-7	140
Prairie Kingsnake	calligaster		D	S3	N5
Tamo Kingshake	Lampropeltis getula		<u> </u>	- 55	140
Speckled Kingsnake	holbrooki	Threatened	D	S1	N5
opconied milyshane	, IOIDI OOKI	Special	ט	01	140
Bullsnake	Pituophis catenifer sayi	Concern	D	S3	N5
Dulialiane	l lidopilis caleillei sayi	OUTGETTI	ט	- 55	INU
Western Foxsnake	Pantherophis vulpinus		S	S5	N5

Common Name	Scientific Name	Iowa Status	Iowa Trend	State Rank	National Rank
Black (Texas) Rat Snake	Pantherophis obsoletus		S	S5	N5
Eastern Hog-nosed					
Snake	Heterodon platirhinos		S	S4	N5
Plains Hog-nosed Snake	Heterodon nasicus	Endangered	K	S1	N5
M	0.1	Endangered (Federal			
Eastern Massasauga	Sistrurus catenatus	Candidate	D	0.1	NO NA
	catenatus	Sp.)	D	S1	N3, N4
Timber Rattlesnake	Crotalus horridus		D	S3	N5
Prairie Rattlesnake	Crotalus viridis	Endangered	K	S1	N5
Copperhead	Agkistrodon contortrix	Endangered	D	S1	N5

APPENDIX 8. List of lowa mussels considered by the IWAP.

Listing: SC = special concern, T = Threatened, E = endangered,

X = extirpated.

lowa Abundance: A = abundant, C = common locally, U = uncommon, R = rare, K = unknown, X = possibly extirpated.

Iowa Trend: I = increasing, S = stable, D = decreasing, K = unknown.

See Appendix 11 definitions of NatureServe Iowa and National Status rankings.

Taxonomic order derived from D. D. Turgeon, J. F. Quinn Jr., A. E. Bogan, E. V. Coan, F. G. Hochberg, Jr., W. G. Lyons, P. M. Mikkelsen, R. J. Neves, C. F. E. Roper, G. Rosenberg, B. Roth, A. Scheltema, F. G. Thompson, M. Vecchione & J. D. Williams. 1998. Common and scientific names of aquatic invertebrates from the United States and Canada: Mollusks. 2nd Edition. American Fisheries Society, Special Publication 26, Bethesda, Maryland. ix + 526 pp

			Iowa	Iowa	State	National
Common Name	Scientific Name	Listing	Abundance	Trend	Rank	Rank
	Order: Unionoida					
	Family: Unionidae					
Mucket	Actinonaias ligamentina		U	D	S3	N5
Elktoe	Alasmidonta marginata		U	D	S3	N4
Slippershell	Alasmidonta viridis	Е	R	D	S1	N4
Three ridge	Amblema plicata		С	D	S4	N5
Flat floater	Anodonta suborbiculata		R	D	S1	N5
Cylinder (Cylindrical	Anodontoides					
papershell)	ferussacianus	Т	R	D	S2	N5
Rock pocketbook	Arcidens confragosus		U	D	S3	N4
Spectacle case	Cumberlandia monodonta	Е	R	D	S1	N2N3
Purple pimpleback						
(Purple wartyback)	Cyclonaias tuberculata	Т	R/X?	D	S1	N5
Butterfly	Ellipsaria lineolata	Т	U	K	S2S3	N4
Elephant ear	Elliptio crassidens	Х	Χ		SX	N5
Spike	Elliptio dilatata		U	D	S2	N5
Snuffbox	Epioblasma triquetra	Χ	Χ		SX	N3
Ebonyshell	Fusconaia ebena	Х	R	D	S1	N4N5
Wabash pigtoe	Fusconaia flava		U	D	S3	N5
Ozark pigtoe	Fusconaia ozarkensis	Е	X		SX	N3
Plain pocketbook	Lampsilis cardium		С	D	S3	N5
Higgins' eye						
pearlymussel	Lampsilis higginsi	Е	R	D	S1	N1
Fatmucket	Lampsilis siliquoidea		С	D	S3	N5
	Lampsilis teres					
Yellow sandshell	anodontoides	Е	R	D	S1	N5
Slough sandshell	Lampsilis teres teres	Е	R	D	S1	N5
White heelsplitter	Lasmigona camplanata		U	D	S3	N5
Creek heelsplitter	Lasmigona compressa	Т	R	D	S1	N5
Fluted shell	Lasmigona costata		R	D	S2	N5
Fragile papershell	Leptodea fragilis		U	D	S3	N5
Scaleshell	Leptodea leptodon	X	X		SX	N1

			lowa	Iowa	State	National
Common Name	Scientific Name	Listing	Abundance			Rank
Black sandshell	Ligumia recta	Ŭ	U	D	S3	N5
Pondmussel	Ligumia subrostrata	Χ	Χ		SX	N4N5
Washboard	Megalonaias nervosa		С	D	S3	N5
Threehorn wartyback	Obliquaria reflexa		U	D	S3	N5
Hickorynut	Obovaria olivaria		U	D	S3	N4
Bullhead (Sheepnose)	Plethobasus cyphyus	Е	R	D	S1	N3
Pyramid pigtoe	Pleurobema rubrum	Χ	X		SX	N2N3
Round pigtoe	Pleurobema sintoxia	Е	R	D	S2	N4
Pink heelsplitter	Potamilus alatus		U	D	S3	N5
Fat pocketbook	Potamilus capax	Х	Х		SX	N1
Pink papershell	Potamilus ohiensis		U	D	S3	N5
Giant floater	Pyganodon grandis		U	D	S3	N5
Winged mapleleaf	Quadrula fragosa	Χ	X		SX	N1
Monkeyface	Quadrula metanevra		U	D	S3	N4
Wartyback	Quadrula nodulata		U	D	S3	N4
Pimpleback	Quadrula pustulosa		U	D	S3	N5
Mapleleaf	Quadrula quadrula		U	D	S3	N5
Salamander mussel	Simpsonaias ambigua	Х	Χ	K	SX	N3
Strange floater (Creeper,						
formerly Squawfoot)	Strophitus undulatus	Т	R	D	S2	N5
Lilliput	Toxolasma parvus		R	D	S2	N5
Pistolgrip	Tritogonia verrucosa	Е	R	D	S1	N4
Fawnsfoot	Truncilla donaciformis		R	D	S2	N5
Deertoe	Truncilla truncata		J	D	S3	N5
Pondhorn	Uniomerus tetralasmus		R	K	S1	N4
Paper pondshell	Utterbackia imbecillis		R	D	S2	N5
	Venustaconcha					
Ellipse	ellipsiformis	Т	R	D	S1	N?
	Order: Veneroida					
	Family: Dreissenidae					
Zebra mussel	Dreissena polymorpha				SE	NE
	Family: Corbiculidae					
Asian clam	Corbicula fluminea				SE	NE
	Family: Sphaeriidae					
Fingernail clams	Spp.					

APPENDIX 9. List of lowa butterflies considered by the IWAP.

Iowa Abundance: C = common, LC = locally common, U = uncommon, R = rare.

Iowa Trend: K = unknown, S = stable, D = decreasing,

Iowa Rank: See Appendix 11 definitions of NatureServe Iowa and National Status rankings.

SC=Special Concern

Taxonomic order and scientific names derived from Opler, P. A., and A. D. Warren. 2002. Butterflies of North America. 2. Scientific Names List for Butterfly Species of North America, north of Mexico. C.P Gillette Museum of Arthropod Diversity, Department of Bioagricultural Sciences and Pest Management, Colorado State University, Fort Collins, Colorado. 79 pp. This can be accessed at: http://www.biology.ualberta.ca/old_site/uasm/Opler&Warren.pdf

0	Ocionaldia Nama	lowa	lowa	lowa	National
Common Name	Scientific Name	Abundance	rena	Rank	Rank
Swallowtails: Family Pap					
Swallowtails: Subfamily		Б	17	00.00	NIE
Pipevine Swallowtail	Battus philenor	R	K	S3, SC	N5
Zebra Swallowtail	Eurytides marcellus	R	K	S1, SC	N5
Black Swallowtail	Papilio polyxenes	С	S	S5	N5
Giant Swallowtail	Papilio cresphontes	U	K	S4	N5
Eastern Tiger Swallowtail	Papilio glaucus	С	S	S5	N5
Spicebush Swallowtail	Papilio troilus	R	K	SNR	N5
Whites and Sulphurs: Fa					
Whites: Subfamily Pierin					
Checkered White	Pontia protodice	U	K	S4	N4
Cabbage White	Pieris rapae	С	S	SNA	N5
Olympia Marble	Euchloe olympia	R	K	S3, SC	N4
Sulphurs: Subfamily Col	iadinae				
Clouded Sulphur	Colias philodice	С	K	S5	N5
Orange Sulphur	Colias eurytheme	С	K	S5	N5
Southern Dogface	Zerene cesonia	LC	K	SNA	N5
Cloudless Sulphur	Phoebis sennae	LC	K	SNA	N5
Little Yellow	Eurema lisa	LC	K	SNR	N5
Sleepy Orange	Eurema nicippe	R	K	SNR	N5
Dainty Sulphur	Nathalis iole	LC	K	SNR	N5
Gossamer-wings: Family	Lycaenidae				
Harvesters: Subfamily M					
Harvester	Feniseca tarquinius	U	K	S2	N4
Coppers: Subfamily Lyca	aeninae				
American Copper	Lycaena phlaeas	U	K	S4	N5
Gray Copper	Lycaena dione	LC	K	S4	N5
Bronze Copper	Lycaena hyllus	С	K	S5	N5
Purplish Copper	Lycaena helloides	R	D	S3,SC	N5
Hairstreaks: Subfamily T				·	
Coral Hairstreak	Satyrium titus	С	K	S4	N5
Acadian Hairstreak	Satyrium acadica	U	K	S3, SC	N5

Common Name	Scientific Name	lowa Abundance	lowa Trend	lowa Rank	National Rank
Edward's Hairstreak	Satyrium edwardsii	U	K	S3, SC	N5
Banded Hairstreak	Satyrium calanus	LC	K	S3	N5
Hickory Hairstreak	Satyrium caryaevorum	R	K	S3, SC	N4
Striped Hairstreak	Satyrium liparops	U	K	S3, SC	N5
Henry's Elfin	Callophrys henrici	LC	K	S4	N4
Juniper Hairstreak	Callophrys gryneus	LC	K	S4	N5
White M Hairstreak	Parrhasius m-album	R	K	SNR	N5
Gray Hairstreak	Strymon melinus	С	K	S4	N5
Blues: Subfamily Polyon	nmatinae				
Marine Blue	Leptotes marina	R	K	SNA	N5
Reakirt's Blue	Echinargus isola	С	K	SNR	N5
Eastern-tailed Blue	Everes comyntas	С	K	S5	N5
Summer Azure	Celastrina neglecta	С	K	SNR	N5
	Glaucopsyche			S3	
Silvery Blue	lygdamus	R	K	Threatened	N3
Melissa Blue	Plebejus melissa	LC	K	S3	N5
*Greenish Blue	Plebejus saepiolus	R	K	SNR	N5
Metalmarks: Family Riod					
*Swamp Metalmark	Calephelis mutica	R	K	SH	N3
Brushfoots: Family Nym					
Snouts: Subfamily Libyt	heinae				
American Snout	Libytheana carinenta	С	K	SNR	N5
Heliconians and Fritillario		inae			
*Gulf Fritillary	Agraulis vanillae	R	K	SNA	N5
Variegated Fritillary	Euptoieta claudia	LC	K	SNR	N5
Great Spangled Fritillary	Speyeria cybele	С	K	S4	N5
Aphrodite Fritillary	Speyeria aphrodite	LC	K	S4	N5
Regal Fritillary	Speyeria idalia	R	D	S2, SC	N3
Silver-bordered Fritillary	Boloria selene	LC	K	S4	N5
Meadow Fritillary	Boloria bellona	LC	K	S4	N5
True Brushfoots: Subfar					. 10
Gorgone Checkerspot	Chlosyne gorgone	LC	K	S4	N4
Silvery Checkerspot	Chlosyne nycteis	LC	K	S4	N5
Pearl Crescent	Phyciodes tharos	C	K	S5	N5
*Tawny Crescent	Phyciodes batesii	R	K	SNR	N3
Tawny Gressent	1 Try orocico barcon		- 11	S2	140
Baltimore Checkerspot	Euphydryas phaeton	LC	S	Threatened	NNR
Ozark Baltimore					
Checkerspot	Euphydryas phaeton	R	K	SNR	N3
Over the se NA se I	Polygonia		17	0.5	NIT
Question Mark	interrogationis	C	K	S5	N5
Eastern Comma	Polygonia comma	С	K	S5	N5
Gray Comma	Polygonia progne	U	K	S3	N5
Compton Tortoiseshell	Nymphalis vaualbum	U	K	SNR	N5
Mourning Cloak	Nymphalis antiopa	С	K	S4	N5

Common Name	Scientific Name	lowa Abundance	lowa Trend	lowa Rank	National Rank
Milbert's Tortoiseshell	Nymphalis milberti	U	K	SNR	N5
American Lady	Vanessa virginiensis	С	K	S5	N5
Painted Lady	Vanessa cardui	С	S	S5	N5
Red Admiral	Vanessa atalanta	С	S	S5	N5
Common Buckeye	Junonia coenia	С	S	SNA	N5
Admirals and Relatives:		ae			
	Limenitis arthemis				
Red-spotted Purple	astyanax	LC	K	S4	N5
Viceroy	Limenitis archippus	С	K	S4	N5
Leafwings: Subfamily C					
Goatweed Leafwing	Anaea andria	R	K	SNR	N5
Emperors: Subfamily A	•				
Hackberry Emperor	Asterocampa celtis	С	K	S5	N5
Tawny Emperor	Asterocampa clyton	LC	K	S4	N5
Satyrs: Subfamily Saty	rinae				
Northern Pearly Eye	Enodia anthedon	LC	K	S3	N5
Eyed Brown	Satyrodes eurydice	LC	K	S4	N4
Little Wood Satyr	Megisto cymela	С	K	S4	N5
				S1	
Common Ringlet	Coenonympha tullia	R	D	Endangered	N5
Common Wood Nymph	Cercyonis pegala	С	K	S5	N5
Monarchs: Subfamily D	anainae				
Monarch	Danaus plexippus	С	K	S5	N5
Queen	Danaus plexippus	R	K	SNR	N5
Skippers: Family Hespe	eriidae				
Spread-wing Skippers:	Subfamily Pyrginae				
Silver-spotted Skipper	Epargyreus clarus	С	K	S4	N5
Hoary Edge	Achalarus lyciades	R	K	SNR	N5
Southern Cloudywing	Thorybes bathyllus	LC	K	S4	N5
Northern Cloudywing	Thorybes pylades	LC	K	S4	N5
Hayhurst's Scallopwing	Staphylus hayhurstii	U	K	SNR	N5
Dreamy Duskywing	Erynnis icelus	R	K	S3, SC	N5
Sleepy Duskywing	Erynnis brizo	R	K	S3, SC	N5
Juvenal's Duskywing	Erynnis juvenalis	U	K	S4	N5
Horace's Duskywing	Erynnis horatius	LC	K	S4	N5
Mottled Duskywing	Erynnis martialis	LC	K	S3	N3
Columbine Duskywing	Erynnis lucilius	R	K	S3, SC	N4
Wild Indigo Duskywing	Erynnis baptisiae	U	K	S3, SC	N5
Persius Duskywing	Erynnis persius	R	K	SNR	N5
Common Checkered-					
Skipper	Pyrgus communis	LC	K	SNR	N5
Common Sootywing	Pholisora catullus	С	K	S5	N5
Grass-skippers: Subfar	nily Hesperiinae				
Least Skipper	Ancyloxypha numitor	С	K	S5 S1	N5
Poweshiek Skipper	Oarisma poweshiek	R	D	S1 Threatened	N2

	0 : N	lowa	lowa	lowa	National
Common Name	Scientific Name	Abundance		Rank	Rank
European Skipper	Thymelicus lineola	U	K	SNA	NA
Fiery Skipper	Hylephila phyleus	LC	K	SNR	N5
*Uncas Skipper	Hesperia uncas	R	K	SNA	N4
*Ottoe Skipper	Hesperia ottoe	U	K	S2, SC	N3
Leonard's Skipper	Hesperia leonardus	R	K	S2, SC	N4
				S1	
Dakota Skipper	Hesperia dacotae	R	D	Endangered	N2
Peck's Skipper	Polites peckius	LC	K	S5	N5
Tawny-edged Skipper	Polites themistocles	O	K	S5	N5
Crossline Skipper	Polites origenes	LC	K	S4	N5
Long Dash	Polites mystic	LC	K	S4	N5
Northern Broken-Dash	Wallengrenia egeremet	LC	K	S4	N5
Little Glassywing	Pompeius verna	LC	K	S4	N5
Sachem	Atalopedes campestris	LC	K	SNA	N5
Arogos Skipper	Atrytone arogos	R	D	S2, SC	N3
Delaware Skipper	Anatrytone logan	С	K	S5	N5
	-			S2	
Byssus Skipper	Problema byssus	R	K	Threatened	N3
				S2	
Mulberry Wing	Poanes massasoit	R	K	Threatened	N4
Hobomok Skipper	Poanes hobomok	С	K	S4	N5
Zabulon Skipper	Poanes zabulon	LC	K	S3, SC	N5
Broad-winged Skipper	Poanes viator	LC	K	S3, SC	N5
Dion Skipper	Euphyes dion	LC	K	S3, SC	N4
Black Dash	Euphyes conspicua	LC	K	S4	N4
Two-spotted Skipper	Euphyes bimacula	R	K	S3, SC	N4
Dun Skipper	Euphyes vestris	LC	K	S4	N5
Dusted Skipper	Atrytonopsis hianna	U	K	S3, SC	N4
Pepper and Salt Skipper	Amblyscirtes hegon	R	K	S3, SC	N5
Common Roadside-					
Skipper	Amblyscirtes vialis	LC	K	S3	N5
Eufala Skipper	Lerodea eufala	LC	K	SNA	N5

APPENDIX 10. List of Iowa dragonflies and damselflies considered by the IWAP.

lowa Abundance: C = common, U = uncommon, R = rare, ER = extremely rare.

See Appendix 11 definitions of NatureServe Iowa and National Status rankings.

Taxonomic Oder follows A Checklist of North American Odonata by Dennis R. Paulson and Sidney W. Dunkle 2011 ed. http://www.odonatacentral.org/docs/NA Odonata Checklist 2009.pdf

	Q : N		lowa	National
Common Name	Scientific Name	Abundance	Status	Status
Broad-winged damsels: C				
River Jewelwing	Calopteryx aequabilis	С	S5	N5
Ebony Jewelwing	Calopteryx maculata	С	S5	N5
American Rubyspot	Hetaerina americana	С	S5	N5
Smoky Rubyspot	Hetaerina titia	U	S3	N5
Spreadwings: Lestidae				
Great Spreadwing	Archilestes grandis	U	S3	N5
Southern Spreadwing	Lestes australis	U	S3	N5
Spotted Spreadwing	Lestes congener	R	S2	N5
Emerald Spreadwing	Lestes dryas	U	S3	N5
Amber-winged Spreadwing	Lestes eurinus	U	S3	N4
Sweetflag Spreadwing	Lestes forcipatus	R	S2	N5
Elegant Spreadwing	Lestes inaequalis	ER	S1	N5
Slender Spreadwing	Lestes rectangularis	С	S4	N5
Lyre-tipped Spreadwing	Lestes unguiculatus	С	S5	N5
Pond Damsels: Coenagric				
Eastern Red Damsel	Amphiagrion saucium	U	S3	N5
Paiute Dancer	Argia alberta	R	S2	N4
Blue-fronted Dancer	Argia apicalis	С	S5	N5
Emma's Dancer	Argia emma	ER	S1	N5
Violet (Variable) Dancer	Argia fumipennis	С	S5	N5
Powdered Dancer	Argia moesta	U	S4	N5
Springwater Dancer	Argia plana	U	S3	N5
Blue-tipped Dancer	Argia tibialis	U	S4	N5
Prairie Bluet	Coenagrion angulatum	R	S2	N3?
Taiga Bluet	Coenagrion resolutum	U	S3	N4
River Bluet	Enallagma anna	С	S5	N5
Northern Bluet	Enallagma annexum	U	S3	N5
Rainbow Bluet	Enallagma antennatum	С	S5	N5
Azure Bluet	Enallagma aspersum	C	S5	N5
Double-striped Bluet	Enallagma basidens	U	S4	N5
Boreal Bluet	Enallagma boreale	R	S2	N5
Tule Bluet	Enallagma carunculatum	C	S5	N5
Familiar Bluet	Enallagma civile	C	S5	N5
Alkali Bluet	Enallagma clausum	R	S2	N5
Marsh Bluet	Enallagma ebrium	U	S3	N5
Stream Bluet	Enallagma exsulans	Ü	S4	N5
Skimming Bluet	Enallagma geminatum	C	S4	N5

Common Name	Scientific Name	Abundance	lowa Status	National Status
Hagen's Bluet	Enallagma hageni	С	S5	N5
Orange Bluet	Enallagma signatum	С	S4	N5
Slender Bluet	Enallagma traviatum	U	S3	N5
Vesper Bluet	Enallagma vesperum	R	S2	N5
Citrine Forktail	Ischnura hastata	U	S3	N5
Fragile Forktail	Ischnura posita	U	S3	N5
Eastern Forktail	Ischnura verticalis	С	S5	N5
Sedge Sprite	Nehalennia irene	U	S3	N5
Darners: Aeshnidae				
Canada Darner	Aeshna canadensis	R	S2	N5
Lance-tipped Darner	Aeshna constricta	U	S3	N5
Variable Darner	Aeshna interrupta	R	S2	N5
Black-tipped Darner	Aeshna tuberculifera	ER	S?	N4
Shadow Darner	Aeshna umbrosa	С	S4	N5
Green-striped Darner	Aeshna verticalis	R	S2	N5
Common Green Darner	Anax junius	С	S5	N5
Fawn Darner	Boyeria vinosa	C	S4	N5
Swamp Darner	Epiaeschna heros	ER	S?	N5
Cyrano Darner	Nasiaeschna pentacantha	R	S2	N5
Blue-eyed Darner	Rhionaeshna multicolor	R	S2	N5
Spatterdock Darner	Rhionaeshna mutata	ER	S?	G3G4
Clubtails: Gomphidae	1			
Horned Clubtail	Arigomphus cornutus	U	S3	N4
Jade Clubtail	Arigomphus submedianus	C	S4	N5
Flag-tailed Spinyleg	Dromogomphus spoliatus	Ü	S3	N4N5
Plains Clubtail	Gomphus externus	C	S4	N5
Midland Clubtail	Gomphus fraternus	Ü	S3	N5
Pronghorn Clubtail	Gomphus graslinellus	U	S3	N5
Sulphur-tipped Clubtail	Gomphus militaris	ER	S1	N5
Rapids Clubtail	Gomphus quadricolor	ER	S1	N3N4
Cobra Clubtail	Gomphus vastus	U	S3	N5
Rusty Snaketail	Ophiogomphus rupinsulensis	ER	S1	N5
Sioux Snaketail	Ophiogomphus smithi	ER	S1	not recorded
Common Sanddragon	Progomphus obscurus	С	S4	N5
Riverine Clubtail	Stylurus amnicola	U	S3	N4
Brimstone Clubtail	Stylurus intricatus	ER	S1	N4
Elusive Clubtail	Stylurus notatus	U	S3	N3
Russet-tipped Clubtail	Stylurus plagiatus	U	S3	N5
Arrow Clubtail	Stylurus spiniceps	ER	S?	N4
Cruisers: Macromidae				
Swift (Illinois) River Cruiser	Macromia illinoiensis	U	S3	N5
Royal River Cruiser	Macromia taeniolata	R	S2	N5
Emeralds: Corduliidae				
Common Baskettail	Epitheca cynosura	С	S4	N5
Prince Baskettail	Epitheca princeps	C	S4	N5

			Iowa	National
Common Name	Scientific Name	Abundance	Status	Status
Smoky Shadowdragon	Neurocordulia molesta	R	S2	N4
	Neurocordulia			
Stygian Shadowdragon	yamaskanensis	ER	S1	S5
Plains Emerald	Somatochlora ensigera	U	S3	N3N4
Mocha Emerald	Somatochlora linearis	ER	S1	N5
Skimmers: Libellulidae				
Calico Pennant	Celithemis elisa	U	S3	N5
Halloween Pennant	Celithemis eponina	С	S4	N5
Eastern Pondhawk	Erythemis simplicicollis	С	S5	N5
Dot-tailed Whiteface	Leucorrhinia intacta	С	S4	N5
Spangled Skimmer	Libellula cyanea	R	S1	N5
Slaty Skimmer	Libellula incesta	ER	S1	N5
Widow Skimmer	Libellula luctuosa	С	S5	N5
Twelve-spotted Skimmer	Libellula pulchella	С	S5	N5
Four-spotted Skimmer	Libellula quadrimaculata	R	S2	N5
Blue Dasher	Pachydiplax longipennis	С	S5	N5
Wandering Glider	Pantala flavescens	С	S4	N5
Spot-winged Glider	Pantela hymenaea	U	S3	N5
Eastern Amberwing	Perithemis tenera	С	S5	N5
Common Whitetail	Plathemis lydia	С	S5	N5
Blue-faced Meadowhawk	Sympetrum ambiguum	ER	S1	N5
Variegated Meadowhawk	Sympetrum corruptum	С	S5	N5
Saffron-winged				
Meadowhawk	Sympetrum costiferum	U	S3	N5
Black Meadowhawk	Sympetrum danae	ER	S?	N5
Cherry-faced Meadowhawk	Sympetrum internum	U	S4	N5
White-faced Meadowhawk	Sympetrum obtrusum	С	S5	N5
Ruby Meadowhawk	Sympetrum rubicundulum	С	S5	N5
Band-winged (Western)	Sympetrum semicinctum			
Meadowhawk	(sub species = occidentale)	U	S4	N5
Autumn Meadowhawk	Sympetrum vicinum	U	S3	N5
Carolina Saddlebags	Tramea carolina	ER	S1	N5
Black Saddlebags	Tramea lacerata	С	S5	N5
Red Saddlebags	Tramea onusta	С	S5	N5

APPENDIX 11. NatureServe National and Subnational (State) Heritage Status Rank Definitions.

(From www.natureserve.org/explorer/ ranking.htm accessed June 23, 2005.)

Bird listings: B = Breeding, N = Non-breeding.

C = captive, extant only in captivity or as a reintroduced population not yet established.

^{? =} Inexact numeric rank.

Status	Definition
NX SX	Presumed Extirpated—Species or community is believed to be extirpated from the nation or state/province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
NH SH	Possibly Extirpated (Historical)—Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or community could become NH or SH without such a 20-40 year delay if the only known occurrences in a nation or state/province were destroyed or if it had been extensively and unsuccessfully looked for. The NH or SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences.
N1 S1	Critically Imperiled—Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
N2 S2	Imperiled—Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
N3 S3	Vulnerable —Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
N4 S4	Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
N5 S5	Secure—Common, widespread, and abundant in the nation or state/province.

NNR SNR	Unranked—Nation or state/province conservation status not yet assessed.
NU SU	Unrankable—Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
NNA SNA	Not Applicable —A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
N#N# S#S#	Range Rank —A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).
Not Provided	Species is known to occur in this nation or state/province. Contact the relevant natural heritage program for assigned conservation status.

APPENDIX 12. Iowa animal Endangered, Threatened, or Species of Special Concern (from Iowa Code Chapter 77 – Updated in 2011).

Endangered animal species:

Mammals

Indiana Bat *Myotis sodalis*

Plains Pocket Mouse Perognathus flavescens
Red-backed Vole Clethrionomys gapperi
Spotted Skunk Spilogale putorius

Birds

Red-shouldered Hawk

Northern Harrier

Piping Plover

Buteo lineatus

Circus cyaneus

Charadrius melodus

Common Barn Owl Tyto alba

Least TernSterna antillarumKing RailRallus elegansShort-eared OwlAsio flammeus

Fish

Lake Sturgeon
Pallid Sturgeon
Scaphirhynchus albus
Pugnose Shiner
Notropis anogenus
Weed Shiner
Notropis texanus
Pearl Dace
Semotilus margarita
Freckled Madtom
Noturus nocturnus

Bluntnose Darter Etheostoma chlorosomum Least Darter Etheostoma microperca

Reptiles

Yellow Mud Turtle

Wood Turtle

Great Plains Skink

Kinosternon flavescens
Clemmys insculpta
Eumeces obsoletus

Copperbelly Water Snake Nerodia erythrogaster neglecta

Western Hognose Snake Heterodon nasicus
Copperhead Agkistrodon contortrix

Prairie Rattlesnake Crotalus viridis
Massasauga Rattlesnake Sistrurus catenatus

Amphibians

Blue-spotted Salamander Ambystoma laterale

Crawfish Frog Lithobates (Rana) areolata

Butterflies

Dakota Skipper Hesperia dacotae
Ringlet Coenonympha tullia

Land Snails

Iowa Pleistocene Snail

Minnesota Pleistocene Ambersnail

Iowa Pleistocene Ambersnail

Novisuccinea new species B

Discus macclintocki

Novisuccinea new species B

Frigid Ambersnail

Briarton Pleistocene Vertigo

Bluff Vertigo

Vertigo meramecensis

Vertigo new species

Fresh Water Mussels

Spectacle Case Cumberlandia monodonta Slippershell Alasmidonta viridis Buckhorn Tritogonia verrucosa Ozark Pigtoe Fusconaia ozarkensis Bullhead Plethobasus cyphyus Ohio River Pigtoe Pleurobema sintoxia Slough Sandshell Lampsilis teres teres Yellow Sandshell Lampsilis teres anodontoides

Higgin's-eye Pearly Mussel

Lampsilis teres anodontoides

Lampsilis higginsi

Threatened animal species:

Mammals

Least Shrew Cryptotis parva
Southern Bog Lemming Synaptomys cooperi

Birds

Long-eared Owl Asio otus

Henslow's Sparrow Ammodramus henslowii

Fish

Chestnut Lamprey Ichthyomyzon castaneus American Brook Lamprey Lampetra appendix Grass Pickerel Esox americanus Blacknose Shiner Notropis heterolepis Topeka Shiner Notropis topeka Western Sand Darter Ammocrypta clara Moxostoma duquesnei Black Redhorse Burbot Lota lota

Orangethroat Darter Etheostoma spectabile

Reptiles

Slender Glass Lizard Ophisaurus attenuatus Common Musk Turtle Sternotherus odoratus Blanding's Turtle Emydoidea blandingii Ornate Box Turtle Terrapene ornata

Diamondback Water Snake Nerodia rhombifer

Western Worm Snake Carphophis amoenus vermis Speckled Kingsnake Lampropeltis getula holbrooki

Amphibians

Mudpuppy Necturus maculosus

Central Newt Notophthalmus viridescens

Butterflies

Poweshiek Skipperling Oarisma poweshiek Byssus Skipper Problema byssus Mulberry Wing Poanes massasoit Silvery Blue Glaucopsyche lygdamus Baltimore Checkerspot Euphydryas phaeton

Snails

Midwest Pleistocene Vertigo Vertigo hubrichti

Occult Vertigo Vertigo occulta

Fresh Water Mussels

Cylinder Anodontoides ferussacianus Strange Floater Strophitus undulatus Creek Heelsplitter Lasmigona compressa Cyclonaias tuberculata Purple Pimpleback Ellipsaria lineolata Butterfly

Ellipse Venustaconcha ellipsiformis

Special concern animal species:

Mammals

Southern Flying Squirrel Glaucomys volans

Birds

Forster's Tern Sterna forsteri Black Tern Chlidonias niger Peregrine Falcon Falco peregrinus

Bald Eagle Haliaeetus leucocephalus **Fish**

Pugnose Minnow Notropis emiliae

Pirate Perch Aphredoderus sayanus

Reptiles

Smooth Green Snake Opheodrys vernalis
Bullsnake Pituophis catenifer sayi

Butterflies

Dreamy Duskywing

Sleepy Duskywing

Columbine Duskywing

Wild Indigo Duskywing

Ottoe Skipper

Erynnis icelus

Erynnis brizo

Erynnis lucilius

Erynnis baptisiae

Hesperia ottoe

Leonardus Skipper Hesperia I. leonardus

Pawnee Skipper Hesperia leonardus pawnee

Beardgrass (Arogos) Skipper

Zabulon Skipper

Broad-winged Skipper

Sedge (Dion) Skipper

Atrytone arogos
Poanes zabulon
Poanes viator
Euphyes dion

Two-spotted Skipper Skipper Euphyes bimacula

Dusted Skipper Atrytonopsis hianna

Salt-and-pepper Skipper Skipper Amblyscirtes hegon

Pipevine Swallowtail Battus philenor Zebra Swallowtail Eurytides marcellus Olympia White Euchloe olympia Purplish Copper Lycaena helloides Acadian Hairstreak Satyrium acadicum Edward's Hairstreak Satyrium edwardsii Hickory Hairstreak Satyrium caryaevorum Striped Hairstreak Satyrium liparops Swamp Metalmark Calephelis mutica Regal Fritillary Speyeria idalia

Baltimore Checkerspot Euphydryas phaeton ozarkae